THE ELEMENTARY SCHOOL JOURNAL

VOLUME XXXIII APRIL 1933 NUMBER 8

Educational News and Editorial Comment

REVIEWS OF BOOKS IN THE "SCHOOL REVIEW" AND THE "ELEMENTARY SCHOOL JOURNAL"

In the February issue of the *School Review* the editor published the following statement in which he describes the policies of that journal with respect to reviews of books and indicates something of the way those policies have worked out in recent years. The statement is reproduced here because of its general interest and because it will serve as a statement of the policy of the *Elementary School Journal* touching reviews of books. The reader should bear in mind that in general the policies of the two journals are the same except that each has its own particular fields of specialization.

Regular readers of this journal probably do not need to be told that the section devoted to "Reviews and Book Notes" is not conducted as a mere afterthought or a minor addendum to an educational periodical. They will understand that this section is regarded as a feature on a par in importance with any other maintained, on the assumption that subscribers with scholarly interests will require scholarly appraisals of books and monographs in the field of education which the *School Review* undertakes to cover. It may, nevertheless, be in place to make what is, in effect, a report in summary on the way in which the

Boston University
School of Education
Library

policy concerning reviews has worked out in recent years. The statement will refer to the authorship of the reviews, the scope of the reviews, certain other elements of policy, and the relation of the reviews published in this journal to those appearing in the *Elementary School Journal*.

The same readers will not deny to the *School Review* the right to take pride in the distinction both of its reviews and of the list of reviewers. The space allotment to reviews has permitted the publication in each volume of ten issues during the past two years of almost eighty well-considered reviews. These were prepared by not far from sixty different reviewers in a single year and almost a hundred different reviewers over a period of two years. Space cannot be spared to list these contributors or even to demonstrate, by naming a number, their professional standing. A glance at the names signed to the reviews in any issue should be sufficient assurance on this score. The various reviewers have been selected for their competence in the fields represented, and the group resulting may be thought of as a staff of a hundred specialists qualified to address themselves to the diverse tasks of appraisal. The members of the staff have professional connections with more than forty different institutions and organizations located in a score of states distributed in all sections of the country. The policy of achieving a wide distribution of authorship of reviews is similar to that maintained for authorship of articles. With respect to reviewers, as well as in other matters, the *School Review* endeavors to serve as a national journal in its field.

The number of reviews published in a single volume of ten issues has just been reported as almost eighty. Because of the occasional practicability of composite appraisal in a single review of two or more publications on the same subject, the number of books, monographs, bulletins, and series represented in the reviews of a single year is nearer ninety than eighty. In harmony with the subtitle of the *School Review*, the bulk of these reviews deal with publications pertaining to secondary education in its many aspects, among these being curriculum, extracurriculum, methods of teaching, psychology, testing, supervision, organization, administration, pupils, guidance, athletics, teachers, and housing. The aim here is to have the scope of the reviews as broadly representative of the whole field as is the literature published. The reviews include not only publications suitable for the use of administrators and teachers but also textbooks and other books usable by pupils in secondary schools. The ten issues for 1932 included more than thirty reviews of books for the use of pupils in such subject fields as English, history and the other social studies, science, mathematics, foreign language, business, industrial arts, and home economics. While the emphasis has been on publications related to secondary education, books of more general significance have been represented in the reviews—for example, books on school finance, theory of education, educational psychology, and foreign education—with the purpose of keeping those immediately concerned with secondary schools in touch with some of the better books in the more general field. Because of the interrelations of secondary and higher schools, typical books dealing with higher education have also been represented in the reviews.

A few other elements of the policy touching reviews may be mentioned. Only

signed reviews are published. This practice is followed because readers are entitled to know who is essaying appraisal of a given book and because even a reviewer of distinction should be prepared to vouch for what he says concerning a book. All manuscripts of reviews are invited. In the course of a year a number of unsolicited manuscripts of reviews are submitted to the editors by persons not conversant with this item of policy. All unsolicited reviews are declined regardless of apparent merit, the better to safeguard the intent to publish only disinterested reviews. The objective in extending invitations to prepare reviews is a disinterested scholarly appraisal. With this objective in mind, no person is asked to prepare a review if any motive other than scholarly appraisal might be expected to influence what may be written.

A word should be said concerning the relation of reviews in the *School Review* to those in the *Elementary School Journal*. While the *School Review* plays up the literature of secondary education, the *Elementary School Journal* emphasizes in its reviews the phases of education stressed in its articles, namely, elementary education and school administration. Both journals extend the review lists to include many general items and items in special fields not emphasized, but readers will only occasionally find reviews of the same books in both journals. In the few instances when reviews of an identical book are published in both periodicals, the two reviews are by different authors. This practice of differentiating the lists of books reviewed affords the reader of both journals, in the course of a year, appraisement of 150 and more books, monographs, bulletins, or series—an unusually comprehensive review service among educational periodicals. This cooperative arrangement is analogous to that provided in the cycle of twenty annual lists of selected references recently launched by these two journals. Other features in the policy touching reviews in the *Elementary School Journal*, such as the distinction and national distribution of reviewers and the publication only of solicited reviews, are similar to those maintained by the *School Review*.

It may not be inappropriate to make the following summary statement concerning certain aspects of the book-review service afforded by the *Elementary School Journal*. During the past two years this journal has published approximately 155 separate reviews of somewhat more than 165 different books, monographs, bulletins, or series of books. These reviews were prepared by somewhat more than ninety different reviewers. Each year the reviewers had professional connections with approximately thirty different institutions and organizations located in every section of the country. For the two years combined forty-five different institutions and organizations were represented. For 1931 these were located in twenty different states and one foreign country, and for 1932 in fifteen different states.

THE REPORT OF THE JOINT COMMISSION ON THE EMERGENCY IN EDUCATION

Early in January the officers of the National Education Association and of the Department of Superintendence appointed the Joint Commission on the Emergency in Education. The commission met promptly and formulated a program of action. The following paragraphs are quoted from the report of the commission presented to the Department of Superintendence at the Minneapolis meeting.

The situation created by the depression has confronted the schools with a variety of difficult problems. These have been aggravated by the disposition of certain shortsighted and selfish interests to use the depression as a cloak for an attack upon our system of free public schools. We recognize the present situation as a serious emergency, which calls for emergency action.

Accordingly, the commission has organized as a board of strategy. It will serve as a rallying point for the forces made up of teachers, parents, and public-spirited citizens interested in the maintenance and improvement of America's system of free public schools. The commission is organizing so as to be able to exert the full force of the million members of the teaching profession, and of the many millions of parents and citizens interested in preserving the idea of free public education, and of making that idea increasingly articulate in improved schools and colleges. It will not shrink from taking the offensive in cases where that seems the thing to do. It will not forget that it is representing a profession. It will not hesitate to use practical methods to make the influence of the profession felt. We have been meek long enough. The time has come to go out against those who, because of selfishness or ignorance, or both, would make children the victims of the depression.

The commission is taking the initiative in dealing with certain educational problems of common concern to all, which can be most effectively dealt with on a national basis. It recognizes clearly, however, that its program will be most influential and helpful if it works in close co-operation with, and through, the school systems and educational organizations of the various states and localities. It will profit from the effective work which is already being done by these agencies, will seek to pool their experience and to develop plans for united action.

We will call upon those in all ranks of the profession for advice and counsel as we proceed. We will need their aggressive support and will expect to have it in carrying out action decided upon.

There is sufficient time to permit a few indications of the program which has already been outlined and part of which has already been put into action.

It was decided that, instead of shrinking from the attacks which are being made upon public education, we should meet its challengers on their own grounds. Accordingly, a project is being organized whereby the public in general will be encouraged to give answers to the questions which are being raised

concerning the purposes and scope of public education. For example, do the parents of this nation want, or do they not want, free public high schools? Does the principle still hold that every child shall be provided the particular opportunities which are required in order that he may develop such talent as he may possess? We will seek mandates from the rank and file of parents and of citizens on questions such as these.

This project is based on the principle that, if the purposes, scope, and procedures of public education are sound, they will bear scrutiny even in a time of depression and that such scrutiny will strengthen the position of the schools. If the purposes, scope, and procedures of public schools are not sound, then the sooner it is known, the better.

Already material has been prepared and plans for this campaign of educational appraisal have been outlined. You, and others in the field, will hear about them soon.

In another project we are seeking to gain an accurate appraisal of the methods which are being used by the schools in dealing with the difficulties which have resulted from the depression. A collection of bulletins and publicity materials issued by schools with depression problems in mind have been assembled from all over the nation. . . . .

A survey has been made of the national organizations, publications, and other agencies which are exercising influence, or which might exercise influence, on the development of education. We expect to know more accurately who is for, and who is against, free public education, and why. We will use the information gained on these questions.

We are greatly encouraged to discover how many groups are ready and anxious to fight for the American, and opposed to the European, idea of what a school system should be. We are interested in what we are beginning to find out as to the sources of the propaganda which is now appearing against education.

We are giving particular attention to the matter of educational publicity. Many states and localities are now doing excellent work in this field, as the exhibit already mentioned clearly reveals. But there are some places where the contact of the school with the public needs to be placed on a more effective basis. We are now developing and will widely disseminate material designed to assist in bringing this about in all areas—local, state, and national.

The commission is immediately seeking the active aid and aggressive support of all organized groups of the profession. We have developed plans to get in closer touch with many of our national and state organizations through a series of regional conferences, to which the executive heads of these organizations will be invited. Through these regional conferences we plan to reach the state commissioners of education, the executive officers of state educational associations, the presidents of all the departments of the National Education Association, and the officers of numerous other societies, committees, and commissions. We are also planning to ask the members of the executive committee of the Department of Superintendence to participate in one or more of these regional conferences.

At these conferences the program of our commission for the defense of public education will be presented. An occasion will be given for the presentation of problems and plans of state groups and national groups. Our commission hopes to serve as a co-ordinating committee for the efforts of various professional bodies. It is anticipated that the discussions in these regional conferences will tend to strengthen the determination of the leaders to make a vigorous defense of the educational rights of children. May we urge that our professional organizations stand ready to pay the expense of the attendance of their officers at these regional conferences. We do not have the financial resources to bear such expense.

Through conferences with professional and lay groups, our commission hopes to build within the next few months a powerful organization committed to the patriotic and unselfish task of saving the schools and protecting the educational interests of growing children. In such an undertaking we anticipate the enthusiastic support of millions of teachers, parents, and other patriotic citizens, and the active opposition of certain selfish groups who are willing to place their financial interests above those of the great mass of American citizens.

Special attention is called to the following passage of the commission's report.

We believe that there should be no question anywhere as to what is the spirit of the teaching profession at this time. A serious emergency confronts the whole nation. Millions are out of work. What is the duty of teachers in such a period?

In such a time it is the duty of teachers and all public servants to reduce public expenditures to the lowest possible cost consistent with the maintenance of essential services. This is being done by the schools. Nonessentials have been eliminated. Rigid economy is being practiced. The size of classes has been increased. Salaries have been lowered. In some communities even essential parts of the school have been discontinued. Terms have been shortened. In some sections the schools have been closed.

In some communities the depression is creating a situation where the members of our profession must choose between depriving the pupils of essential educational services or of making heavy sacrifices of our time, energy, and personal resources. When it becomes clear in any community that these are the only alternatives, but one choice is possible for our profession. We would prefer to make personal sacrifices rather than to have children denied their educational birthright. It is this loyalty to children that has won for teachers in many communities the admiration of parents and that has paved the way for effective cooperation in the defense of the schools.

Health service, kindergartens, libraries, night schools, and other indispensable educational offerings must be maintained. The integrity of the public school must be guaranteed at any cost. This is of first importance if the morale of parents is to be maintained during this difficult period and if the children of the nation are to be prepared to meet the problems that lie ahead.

CITIZENS' COUNCILS FOR CONSTRUCTIVE ECONOMY

At the call of the President of the United States, a group of citizens representing labor, agriculture, business, industry, education, and other public-welfare agencies met in Washington on January 5, 1933, to consider the crisis in education. One of the recommendations of that conference was that there be set up in every community a broadly representative citizens' council for the purpose of clarifying and mobilizing public opinion on all matters of vital concern to the community. Following this suggestion, the representatives of a large number of national organizations are sponsoring "the formation of a citizens' council in every municipality and county to work for the maintenance of essential community services and for constructive economy in local and state government." The following statement has been issued by the representatives of these organizations.

The existence of many public and semi-public community services is threatened. Institutions and activities which have been considered the best evidence of our advanced civilization are being greatly curtailed, and in many places actually discontinued. Taxpayers are demanding cuts. Officials are forced to make them. What can be done about it?

Our answer is: Organize local and state citizens' councils to consider the problems of maintaining essential community services in the face of the need for reduction of public expenditures. The objective of such councils would be to promote interest in local and state governmental problems, to the end that the present widespread demands for reductions may produce actual and permanent improvements in government, the tax system, and the services rendered by public and semi-public agencies.

The local organization proposed will be called a "Citizens' Council on Constructive Economy." It will be composed of representatives of local groups interested in good government, such as the league of women voters, the parent-teachers' association, women's clubs, labor groups, luncheon clubs, chamber of commerce, and other similar groups. It will also include representatives of public and semi-public boards, such as those concerned with schools, libraries, playgrounds, museums, health, welfare, and local colleges and universities. Each council will be autonomous. Its purpose will be to secure for the public the greatest possible benefit from the expenditure of public funds.

The national organizations issuing this statement will ask their members to participate in the formation of local councils. They will also send to their members suggestions as to how the councils may carry on their activities.

The citizens'-council idea grew out of informal conferences in New York, Chicago, and Washington, following the Citizens' Conference on the Crisis in

Education, called by President Hoover in January. This movement is not, however, concerned with any particular service. It is an attempt to bring into existence councils of local organizations interested in all the services, in good government, and in real economy. Misinformation is rampant. It is expected that the first effort of each local council will be to get the facts about costs and wastes of local government and actual services performed, as well as demands for service, and to pass these facts on to the members of the organizations which the council represents. When there are recommendations to be made to public authorities, whether for elimination of waste or improvement of a service, the Citizens' Councils, in co-operation with constituent citizen groups, will speak for the public at large, with adequate consideration of the city's needs and obligations, and should be able to secure such action as is clearly in the public interest.

A clearing-house for information about Citizens' Councils for Constructive Economy will be maintained in the office of the National Municipal League, 309 East Thirty-fourth Street, New York City.

This statement is issued on behalf of the following persons:

R. K. Atkinson, Director of Education, Boys' Clubs of America, Inc.
Frank Bane, Director, American Public Welfare Association
Helen Beckley, Executive Secretary, American Association of Hospital Social Workers
Paul V. Betters, Executive Secretary, American Municipal Association
George F. Bowerman, Librarian, Public Library of the District of Columbia
Mrs. Hugh Bradford, President, National Congress of Parents and Teachers
Louis Brownlow, Director, Public Administration Clearing House
Allen T. Burns, Executive Director, Association of Community Chests and Councils
Harold S. Buttenheim, Editor, *The American City*
Bert W. Caldwell, Executive Secretary, American Hospital Association
Morse A. Cartwright, Director, American Association for Adult Education
Carl H. Chatters, Executive Director, Municipal Finance Officers' Association
H. V. Church, Executive Secretary, Department of Secondary-School Principals of the National Education Association
Laurence V. Coleman, Director, American Association of Museums
Kendall Emerson, Acting Executive Secretary, American Public Health Association; Managing Director, National Tuberculosis Association
Ray Fife, President, American Vocational Association
Michael F. Gallagher, Chairman, Trustees Section of the American Library Association
Luther H. Gulick, Director, Institute of Public Administration
Arnold Bennett Hall, Brookings Institution
Lee F. Hanmer, Russell Sage Foundation
Mrs. Florence Curtis Hanson, Secretary-Treasurer, American Federation of Teachers

C. L. Harrington, Executive Secretary, Association for Progress through Libraries
A. R. Hatton, Professor of Political Science, Northwestern University
Fred Hewitt, American Federation of Labor
William A. Howe, Secretary-Treasurer, American Association of School Physicians
Robert Maynard Hutchins, President, University of Chicago
Rev. George Johnson, National Catholic Welfare Conference
Howard P. Jones, Public Relations Secretary, National Municipal League
Charles H. Judd, Dean, School of Education, University of Chicago
Robert L. Kelly, Executive Secretary, Association of American Colleges
Howard R. Knight, General Secretary, National Conference of Social Work
Loula D. Lasker, Associate Editor, *The Survey*
Kathryn McHale, Director, American Association of University Women
C. R. Mann, Director, American Council on Education
Carl H. Milam, Secretary, American Library Association
E. D. Mitchell, Secretary-Editor, American Physical Education Association
James A. Moyer, President, National Commission on the Enrichment of Adult Life
R. M. Paige, Secretary, Governmental Research Association
Mrs. Grace Morrison Poole, President, General Federation of Women's Clubs
Milton C. Potter, Superintendent of Schools, Milwaukee, Wisconsin
Thomas H. Reed, Chairman, National Municipal League's Committee on Constructive Economy, and of Committee on Policy, American Political Science Association
Clarence E. Ridley, Executive Director, International City Managers' Association
Belle Sherwin, President, National League of Women Voters
Flavel Shurtleff, Secretary, National Conference on City Planning
Donald C. Stone, Director, National Committee on Municipal Standards; adviser to International Association of Public Works Officials
Fred Telford, Director, Bureau of Public Personnel Administration; Secretary, Civil Service Assembly of the United States and Canada
Rev. Worth M. Tippy, Executive Secretary, Department of Church and Social Service, Federal Council of the Churches of Christ in America
Henry W. Toll, Director, American Legislators' Association
Levering Tyson, Director, National Advisory Council on Radio in Education
Walter West, Executive Secretary, American Association of Social Workers

MR. HEARST AND THE "SATURDAY EVENING POST": CONFLICTING ATTITUDES WITH RESPECT TO THE SUPPORT OF PUBLIC EDUCATION

The following correspondence reveals a fundamental difference in the points of view held by two of the nation's leading publishers with

respect to the support of public education. The first letter reproduced is one from William Randolph Hearst to the editor of the *Herald and Examiner*, Chicago. Mr. Hearst, it will be recalled, is the owner of the chain of Hearst newspapers. The letter follows:

Education has been the basis of American progress, and now, at the moment when foreign nations have realized the importance of education and are making great progress in educating their people and fitting them for world competition, we are curtailing our education program.

Education is not merely for the upper classes.

The reason the American workman has been able to compete successfully is because of his educated intelligence.

The reason our nation has been successful is because of the high average of intelligence of the electorate.

No democracy can succeed, and no nation can compete under modern conditions, without an intelligent and educated citizenry.

This depression is only temporary, but the effect of restricting education will be permanent.

Use your best efforts to prevent curtailment of school expenses. Try to secure the same progress in these days of depression that we would have made in good times.

The depression should teach us that if we had a sufficiently educated and enlightened electorate we might be able to obviate such catastrophes.

I think the matter is of prime importance.

On February 1, 1933, the following letter was addressed to the editor of the *Saturday Evening Post* by the faculty of the Moseley School, Chicago.

We, the teachers of the Moseley School, Chicago, appeal to the Curtis Publishing Company to assume a fair and sportsmanlike attitude toward education and to present both sides of the argument regarding expenditures for public schools.

Edwin Lefevre, in the January 28th issue, tells of a teacher who was indignant because her December salary was not paid and she could not go to Bermuda. The fact is that Chicago teachers have not been paid since May, 1932, many are receiving charity because their funds have been exhausted, and tax warrants which were issued them for December, 1931, and months previous to that were sold in many cases at 30 per cent discount. A similar situation exists in many other cities, and the large majority of teachers are not thinking of Bermuda but are living under a severe mental strain due to actual want, suffering, and anxiety for the future.

An editorial in the January 14th issue states that schools are becoming country clubs, that many institutions have gymnasiums and shower baths. A sur-

vey would show that most schools are sadly in need of adequate facilities in the teaching and maintenance of health, which is considered of paramount importance by leading educators.

Mr. Sargent, in the same issue of your magazine, indicated that the civic-minded citizens of Chicago would not permit the city to go into default on an $18,000,000 bond issue, that they would come to the rescue and save the situation. He was advocating economy in government. He did not state that the bonds were to be changed from 4 per cent to 6 per cent, nor did he explain how such a change would tend to reduce the expenditures of municipal government. . . . .

We believe that true recovery in national as well as municipal affairs can be brought about only by publishing all the facts, by permitting criticism and careful analysis of the same, and by gradually bringing about reorganization of every vital branch of government, commerce, and industry. To shift criticism to public education is merely drawing attention away from important issues which are in need of immediate attention.

Would you publish an article in the *Saturday Evening Post* which presents the teachers' side of the case? We believe that we can submit an article which would be of interest to your readers.

The editors of the *Saturday Evening Post*, on February 3, 1933, replied as follows:

We are in receipt of your letter of the 1st. You have apparently read into Mr. Lefevre's article a meaning and intention that were not in his thoughts when he wrote it, nor in ours when we published it. His article was not a criticism of teachers or of teaching. Nor did Mr. Lefevre question the abilities or the devotion to their calling of the average teachers. His criticism was directed at the increasing number of extra-curriculum activities that the taxpayer has been forced to pay for in recent years, and which he cannot afford under present conditions, and at over-elaborate plants. His remarks naturally did not apply to schools that do not have over-elaborate plants. He cited the case of the local teacher, not primarily because she was a teacher, but because her attitude to the financial crisis in her town was typical of the tax-blindness he was about to discuss. She entirely overlooked the vitally important fact that the schools in many cities and states, like other units, have been taking much more money than the taxpayer can afford to pay. One need only look over the list of delinquent taxes and tax sales to see that there must be retrenchment all along the line if the farmer and the small home owner are to get relief. What Mr. Lefevre wanted to bring out was that taxpayers have rights that cannot be ignored, even in the name of education. Retrenchment is a necessary step if our country is to get its national and local affairs on a solvent basis.

Mr. Lefevre's article is a survey of the present tax crisis, and a discussion of the possible means of meeting it. His comments on the high cost of education

were merely incidental in his review of national extravagances that have combined to place an unbearable burden on the American taxpayer.

We do not see how any intelligent reader who has the good of his country at heart and has any knowledge of present-day conditions can take a different position.

The writer of this letter attended the old Moseley High School for four years. It had a staff of excellent teachers, some of whom would rank at the top in almost any educational institution, and it graduated many men who were heard from in the professions and in the world of affairs in after-life. In those days, however, its activities were confined to giving those who attended it a solid education. We have no doubt that it serves the same admirable purpose today.

THE NATIONAL SURVEY OF SCHOOL FINANCE

In 1931 Congress appropriated funds to be employed in making a nation-wide survey of school finance. The survey was planned to cover a period of four years, but Congress failed to make an appropriation for the second year. For a time it appeared that the major lines of investigation undertaken in the survey would have to be abandoned. Abandonment was prevented, however, by a grant of $25,000 from the General Education Board, which enabled the survey staff to carry to completion part of its original program. The findings of the survey have recently been published in three volumes: (1) *State Support for Public Education*, (2) *Research Problems in School Finance*, and (3) *Bibliography on School Finance, 1923–1931*. The first of these volumes may be secured from the American Council on Education, 744 Jackson Place, Washington, D.C., for $2.00. The second may be secured from the same source for $1.00. The third is published as Bulletin Number 15, 1932, by the United States Office of Education at a price of 20 cents.

Something of the scope and content of the volume on *State Support for Public Education* may be gathered from the following quotation from the Introduction.

Chapter ii gives an historical treatment of the two fundamental principles underlying state school support. The reading of Chapter ii is not essential to the understanding of the remaining chapters.

Chapters iii through x present a detailed analysis of the present financial systems in the various states, including such an appraisal as will indicate in detail what are believed to be the next steps in the improvement of the programs of the individual states. The first of this series, chapter iii, shows the present minimum program offered in the states and compares it with the minimum

program which the experience of its own communities would justify the state in providing. Chapter iv appraises the measures now used for distributing state aid in each of the states, the appraisal being given in sufficient detail to bring out the shortcomings in the measures now used, as related to attainable standards of equity. Chapter v gives a similar appraisal of measures of relative ability of local districts to support schools, the appraisal being made in terms of attainable standards. Chapter vi appraises the equitableness of the equalization of burden in the various states. Here, again, the standard for comparison is the practice in the individual state judged in the light of attainable standards of equity in the state itself. Chapter vii gives an analysis of financial provisions for local initiative in the various states. Chapter viii deals with the problem of safeguarding local expenditure of state funds. Chapter ix analyzes present methods of alimenting state funds and the methods of determining the state's share in school support. Chapter x discusses the various issues that must be considered in improving state school support programs in individual states.

The chapters outlined above are followed by supplements which give basic material and describe methods of treatment of data. Supplement I gives data on the financial statistics of state school systems in five-year periods, from 1910 to 1930, inclusive, and the trends of expenditure for schools and other governmental functions. Supplement II gives a full account of the provisions for transportation and non-resident tuition in the various states. Supplement III describes the methods that were used in the development of the national pupil-teacher index and gives information which should be valuable to anyone who intends to use this index. Supplement IV describes in detail the method by which the formula for determining the relative costs of maintaining comparable schools in the various sections of the country was derived. Supplement V gives a description of six state apportionment laws, each representing a different type, and also outlines the changes which have been made in state apportionment laws since they were described by Swift and Zimmerman.

Throughout the report the attempt has been made to appraise present practices in terms of attainable standards of equity. Although the facts on a given topic for all the states are listed in the same table, they are arranged for ease in reference and not for comparative purposes. In most instances the data for the various states are comparable from a practicable point of view, but this fact is not emphasized in the report. In other words, the investigations reported in this volume have not sought to develop indexes by which states could be compared one with another. The purpose has been rather to appraise each state in terms of justifiable and attainable standards. These justifiable and attainable standards were, wherever possible, determined by practices of communities within each individual state. The task ahead is not to bring all states into the same pattern of practice. It is rather to have each sovereign state accept responsibility for meeting attainable standards acceptable to its own people and for meeting those standards in ways which are in harmony with their thinking.

ADDITIONAL EVIDENCE OF THE EFFECTIVENESS OF TEACHING BY MEANS OF MOTION PICTURES

The following statement of Henry W. Holmes, dean of the Graduate School of Education, Harvard University, describing the results of an experiment in the effectiveness of teaching by means of sound motion pictures, was published in a recent issue of the *New York Times*.

The study was made possible by the Carnegie Foundation for the Advancement of Teaching. Dr. Henry Suzzallo and his associates wanted the Harvard Graduate School of Education to get an answer to this specific question: How much, if at all, do sound films increase the effectiveness of teaching?

Obviously, to get an answer to that question which would be at all valuable meant having the best possible films and using them under ordinary school conditions in direct competition with teaching by the usual methods. To get the best possible films the School of Education turned to J. A. Haeseler, director of the University Film Foundation, an organization associated with Harvard University and devoted exclusively to the production of scientific and educational moving pictures.

To set up the requisite experimental conditions in the schools, devise the necessary tests, prepare the necessary materials and conduct the study, the school turned to Dr. P. J. Rulon of its own faculty. The following paragraphs are drawn in large part from Dr. Rulon's preliminary report of his work. His final report will be published during the year as one of the Harvard Studies in Education.

Dr. Rulon organized in three cities near Cambridge three distinct groups of children. They were all in the ninth grade and equal, within narrow limits, in previous instruction in general science and in their scores on a standardized test in general science. They were of approximately the same age, they came from communities of the same type, and they attended the same sort of public school. Finally, two of the groups studied the same material ("The Earth and Its Life") for the same length of time at the same time of day under teachers equal in pedagogical skill and personal enthusiasm.

One group, called the "control group" (1,241 pupils), studied the textbook in the usual manner. The second group, the "film group" (443 pupils), studied the same text, but for fewer hours per week, devoting the remaining time to looking at films. The films, of course, paralleled and illustrated the text. Authorities from the scientific departments of the Harvard faculty talked from the screen, explaining the pictures. The third group, called the "zero group" (296 pupils), did not study the text or see the pictures or have any instruction on this topic.

All three groups were measured at the end by tests carefully devised and standardized to disclose how much had been learned on the particular topic

covered by the text and the films. After three months—to allow for forgetting—the tests were repeated.

It may be said with practical certainty that this experiment was scientific enough to be conclusive. If films increase learning in any substantial degree, that fact should have appeared without the least doubt or question. And it did.

In the tests given immediately after the six-week period of instruction, the film group exceeded the control group in its total score by 20.5 per cent. On the average, in other words, the children taught by films learned one-fifth more than the children taught without.

And they retained about two-fifths as much more; for on the tests given after a period of three months the film group exceeded the control group in its total score by 38.4 per cent. Statistically speaking, these figures are decidedly significant. Practically speaking, it means that the film technique is markedly superior to ordinary textbook teaching.

Some of the more detailed results of this experiment have a peculiar interest. It appears, for example, that the films are rather better for physiography than they are for biology, although good for both. Perhaps it is hard to learn from a textbook how the crust of the earth was formed and how rocks developed. Certainly, moving diagrams and pictures of actual rock formations accompanied by skilful explanation from the screen seemed to make this material very much clearer to the children.

The film group beat the control group on this material by 33.4 per cent on the tests at the end of the instructional period and by 71.2 per cent on the retention tests. In biology, the immediate gain was 13.4 per cent and the final gain 23.2 per cent.

Another interesting distinction appears between scores on test items that were answerable by reference to the text alone and scores on test items that were answerable by reference both to the text and to the films. On items in the test which could be answered only by reference to the text, the film group fell behind the control group, showing a gain 14.7 per cent less than that of its competitors. But this was made up on the tests for retention after the three-month period. The film group retained 0.5 per cent more on the purely text items in the retention test than did the control group.

It should be remembered that the control group was studying the text during the entire time when the film group was looking at the pictures. Somehow the film group must have got a better grasp of the whole business if it could remember after three months even 0.5 per cent more of purely text items than the control group remembered.

Perhaps the most interesting of the detailed results of the experiment arose out of the attempt to separate the test items into those which measured rote memory and those which measured knowledge of relationships. The idea was to distinguish between questions which require mere memorization (for example: How many stars are visible on a clear night? Answer, 2,000) and questions

which might be answered by thinking on the basis of some solid background of knowledge (for example: Do steep streams wear their beds faster than those not so steep?).

Now it is on this distinction that the most interesting difference appears between the film group and the control group. On items of fact the film group was superior to the control group by 14.8 per cent on the immediate tests and 35.2 per cent on the retention tests. On the items that test grasp of relationships the film group was superior by 24.1 per cent immediately and by 43.1 per cent in the end.

It is quite evident that the often-heard criticism of the films—they may teach the children a lot of unrelated facts, but they don't make them think—is not borne out by this experiment.

In sum, it may be said that the Harvard study proves that talking films are a powerful instrument of instruction.

Masters of exposition may speak from the screen and the classroom teacher may have a new and different, but perhaps not less important, part to play in the new teaching in which films are used. But as yet we do not know the relative value of texts or teachers in different subjects at different levels.

THE SCIENTIFIC DEVELOPMENT AND EVALUATION OF THE CURRICULUM[1]

CHARLES H. JUDD
University of Chicago

There was a curriculum before there was a science of education. The first school ever established came into being because someone had something to teach. The something taught was the curriculum. As generations passed and society accumulated the arts and letters and sciences which make up civilization, the curriculum broadened, but the broadening has taken place, in the main, without any systematic effort to evaluate the contents of the teaching program. It was not on the basis of scientific analysis of the mental processes of children, nor on the basis of scientific study of the social order, that the early settlers of New England decided that their children should learn to read the Scriptures. When higher education was first organized on this continent, it adopted, without any effort at scientific justification, the classical-mathematical curriculum which had come down from the Renaissance. Not until the most recent times has the curriculum of the American educational system been subjected to scientific scrutiny.

In order that we may understand the present-day efforts to reconstruct the curriculum on the basis of sound principles derived through systematic studies, I must ask you to tolerate a brief historical discussion which will make clear when and how the scientific study of the curriculum began.

The decade from 1890 to 1900 was a period of upheaval in American education. For generations the schools of this country had exhibited extreme conservatism in methods of teaching. The curriculum of the common schools had been meager in content. Education above the level of the elementary school was the privilege of the few.

[1] Address delivered on March 1, 1933, before the joint meeting of the Department of Superintendence of the National Education Association and the American Educational Research Association.

During the years following 1890 a new spirit began to make itself manifest. The Herbartians were advocating new methods of teaching. The child-study movement was arousing widespread interest in types of experience which had never been thought of as appropriate to schools. Dewey was calling attention to the changes in society which created a demand for a new type of school. Eliot and the other members of the Committee of Ten were organizing high schools. Parker and Harris were contributing to the liberalizing of the elementary school. Toward the end of the decade Rice was testing spelling and arithmetic with results which constituted an indictment of current teaching in those fields and strongly suggested reform.

The outcome of the decade of agitation from 1890 to 1900 was, in an important sense, negative. It is frequently true that science must first tear down before it can begin to build up. When a school system has complacently followed traditional methods for long generations, the first move which must be made is a move to put an end to complacence.

The first fifteen years of this century continued the attack on traditional education. Methods of testing and measuring school results were devised and refined, and, through the application of these methods of exact evaluation, new grounds for discontent with established practices were discovered. By 1910 the survey movement began to develop, and wholesale recommendations were made for the reform of school systems. It was easy in those early days to discover, by tests and measurements, points in any school system where improvements could legitimately be recommended.

It is not in keeping with the facts to say that the reformers of the last decade of the nineteenth century and the contributors to the science of education who carried on studies during the early years of this century produced nothing but negative results. Fruitful suggestions were offered, and highly productive experiments were undertaken in the effort to provide substitutes for the formal and unproductive methods which were criticized and discarded. Gradually the volume of constructive measures increased until about 1915, when a vivid consciousness of the demand for a new body of instructional materials opened the present era of vigorous reconstruction of the curriculum.

The curriculum movement has been reinforced by the insistent demand for new types of instruction resulting from the appearance in the upper grades of the elementary schools and in the high schools of a great variety of new types of pupils. If there had been no science of education, the social pressure of these new types of pupils would have compelled revision of the curriculum.

The final effect of criticisms of traditional practices and of suggestions offered by reformers was the inauguration of a number of scientific studies which made positive contributions to the curriculum. Some of the outstanding positive contributions to curriculum reconstruction made through scientific studies are as follows:

Instruction in spelling has been completely reorganized in recent years. The lists of dictionary words formerly used to drill children in combinations of letters have disappeared. Their place has been taken by lists of words which science has shown to be the words most commonly employed in ordinary life. Authors of reading materials are guided by word lists. Teachers of foreign languages are now supplied with word lists and idiom lists which save them from overattention to comparatively useless phases of their subjects. Makers of textbooks in history base their writings on carefully prepared lists of people and events.

It has doubtless been true from the beginning of schools that teachers have collected materials to use in their courses. The contribution which science has made is emphasis on orderly procedure. The search for available and useful materials is carried on more energetically and more systematically at the present time than ever before. The search is commanding the time and the services of many workers, who are laying broad foundations for the educational structure.

Another type of positive scientific contribution has been made through analysis of the practical situations in life for which education must prepare. "Job analysis," as this procedure is called, has brought into the schools items of instruction which would have escaped the attention of teachers if they had thought only of immature learners. Job analysis has been successfully applied in revising the curriculum in the practical arts and in such professional lines as secretarial activities. Broadly conceived, job analysis means the intelligent anticipation of the requirements of later life. Instead of

waiting until social compulsion forces a revision of the curriculum, the schools are today making a study of the demands which later life will make on their pupils.

Another type of contribution made to the curriculum by the science of education is somewhat more subtle than the two types which have been mentioned. Science has given teachers certain valuable distinctions, the understanding of which is essential to successful teaching. Thus, one of the most brilliant demonstrations of the value of science was given when laboratory experiments proved that oral reading and silent reading are so different in character that the school is not justified in limiting instruction to oral reading. Before this distinction was clearly drawn, the school aimed somewhat indefinitely at a goal which was vaguely thought of as fluent reading. When laboratory experiments showed unequivocally that silent reading is far more fluent than oral reading, a new and highly useful distinction was supplied for the guidance of teachers.

One might go on enumerating the positive contributions of science to the modern curriculum. There is evidence in abundance that improvements are now being effected in rapid succession. It is difficult to estimate the true value of many of these improvements. They are so new that their effects on the educational system cannot now be estimated. It will require the perspective of years to make their values fully apparent.

I am not so much interested, however, at this time in chronicling all that the science of education has accomplished as I am in seizing the opportunity to enlist, if possible, the co-operation of the members of the Department of Superintendence in the larger reconstruction of the curriculum which I believe is imminent. If this department would assume the leadership which is its proper function in view of the fact that its members are the administrative heads of American school systems, there would come to pass in the immediate future a significant systematic reorganization of instruction in the schools of this country which would take advantage of all that the past few decades have taught regarding the defects, virtues, and needs of our educational program. I address myself, therefore, to the future. The historical review is at an end. The history of the schools, like the history of society in general, has reached a turning

point. The proper order of the day is farsighted, constructive, energetic striving for a newer and more productive world.

The major thesis which it is the purpose of this paper to defend is that the reconstruction of the curriculum of the schools calls for the adoption by educators of a new and more comprehensive view of the science of education than has been accepted up to this time. The studies which have been made by the science of education have been of value, but their scope has been limited. The time has come to recognize the fact that the school can be understood and can be properly directed in its activities only when it is viewed as a part of the general social order. To become sufficiently comprehensive, the science of education must ally itself with the whole family of the social sciences and must draw on political science, economics, anthropology, and sociology for methods and materials.

From the broader point of view thus contemplated, the school is seen to be society's agency for transmitting to each new generation the accumulated experiences which have resulted from the long struggles of the race. May I dwell for a moment on a single illustration. Human beings have found that no social group can survive without some form of government which subordinates individual desires to the regulations of society. The crudest bands of pirates and robbers who have broken away from the control of the civil state immediately find it necessary to adopt and enforce codes of laws which are often far more drastic within their spheres of application than are the laws of any civilized state. It would be highly wasteful of human effort for each generation to spend itself in learning the lessons of law and order through the friction of conflict. Society, therefore, has set up in the school an institution where regulations are tempered by sympathetic patience and youth is systematically inducted into organized society. In the best-organized communities even criminal law is administered through the juvenile court in the spirit of the school. One gets a wholly new view of school discipline when one thinks of it as a method of introducing immature individuals to the ways of society.

It is the broad view of the school as a social institution which supplies, I believe, the formula for the reconstruction of the curriculum that we have all been seeking. The absence of a general for-

mula has made many of the recent curriculum studies unproductive. I must be critical of much which has been going on in the school systems of the United States in recent years. Tons of paper have been used in the publication of curriculums which seem to have little or no virtue except that they show the desire for recognition on the part of some superintendent or some specialist in curriculum revision. Many of these revised curriculums are the products of diligent plagiarism. Few of them have achieved, in any degree, integration of the subjects with which they deal. The volume on arithmetic, for example, is often filled with trite formulas which have long confused pupils in their efforts to understand fractions and other arithmetical intricacies. What is needed is a new treatment of the materials of instruction which will integrate arithmetic with history or literature.

The example of arithmetic is the one which always comes to mind when one is trying to find a striking illustration of utter lack of social understanding. Arithmetic is the subject by means of which schools achieve more failures than are brought to pass in all the other subjects taught in the upper grades of the elementary schools. Arithmetic is capable of use as an instument of intellectual execution with an exactness and finality which cannot be approached by any of the interesting subjects in the curriculum. Arithmetic has been little improved since Warren Colburn in 1821 made the textbook which has been imitated again and again with distressing monotony for more than one hundred years.

Some day we shall see arithmetic made into an interesting chapter in a new curriculum. We shall explain to pupils with suitable illustrations how the race strove during long millenniums to count its possessions and calculate with pebbles and with number systems which were utterly incapable of meeting the demand of precision essential to well-organized commerce and industry. We shall no longer rush through the tables of denominate numbers in order to cover a certain stipulated section of arithmetic in a stated period of time. We shall show children how the yard and the quart came into existence in order that men might deal with one another equitably. We shall, in that not very distant day, teach children that insurance is a social device for transferring the risks of life to the broad shoulders of the

group and that taxes, which we nowadays cordially abhor, are essential to the support of community life.

It is nothing less than a crime that arithmetic has been considered by teachers to be a subject of mechanical drill. Arithmetic is one of the greatest inventions which society ever brought into being and refined through generations of use. Arithmetic is a method of thinking. Equipped with this method of thinking, which no individual could possibly have devised for himself, the modern man and the modern child can perform intellectual and practical feats which would have astounded their forbears.

I repeat the statement which I made a few minutes ago: The school curriculum must be thought of as a phase of the social order. That the curriculum may be adequate, its framers must study the social order with the aid of all the scientific methods available. The curriculum is a body of perfected social devices for making man what he is—master of the world in which he lives.

Scarcely are the words about mastery of the world uttered before the pall of a dark conviction settles over the mind of every one of us. We are, in some measure, masters of the world of things, but in the world of human relations we can make no claim to anything approaching complete wisdom or control. In troubled times like the present we are all conscious of the need for more understanding of social forces and of social controls. The school must bear some share of the blame for present-day lack of general intelligence with regard to social, political, and economic problems. So conscious are the schools of their failure to include social, political, and economic training in the curriculum that in many systems syllabuses are being hastily prepared containing references to sociological studies of the family, to the findings of political science, and even to books on banking and finance. Teachers are urged to invent without delay a social order which may be installed within the next few days in place of the capitalistic system and in place of tariff-protected industry. The words "inflation" and "deflation" are used familiarly by sixth-grade pupils, if not by second-grade children.

The difficulty with all this belated effort to repair the curriculum is that it is too often only another spasmodic struggle to inject a new but isolated subject into the school program. I recall the whole-

some doctrine delivered to the Department of Superintendence by the committee which prepared the yearbook dealing with character education. Character cannot be dealt with adequately in a course or in a series of exhortations delivered from time to time during the administration of a curriculum which is not directed in its every line to the training of character. So it is with economics and sociology. It is quite impossible to make children intelligent about society when they have been trained through years by the methods now common in the schools to think of their social inheritance as a series of difficult tasks. The broad science of education which is now in the making will reveal the necessity for social training throughout the whole school life of every child.

The problem before the schools today is the problem of taking out some of the non-socializing materials and making place in every subject for socializing contents. Let me illustrate what is meant by taking out non-socializing materials. We are told—and I like to think it is true—that our Latin grammars, in order to give every possible form to the verbs which are there conjugated, go far beyond actual Roman usage. Even Cicero, with his love for multiplication of words, would not, I am persuaded, have insisted on giving to every one of his verbs all the pluperfect subjunctive forms in all the persons and numbers which misguided pedagogues have long compelled children to learn. In like fashion, there was once a disposition, which is now fortunately outdated, to instil into the minds of all young people the names of the capitals of all the states. Better far that pupils should understand the meaning of co-operation than that the assumption should be stressed that virtue comes from knowledge of the names of the seats of government. The English classics, which have been used in the schools as subjects with which to sharpen the historical and rhetorical insights of young people, have been ruined as examples of literature by the emphasis on irrelevant details which conscientious teachers have felt to be necessary.

One sometimes gets the impression that all this striving for details is due to a dearth of real ideas. The enrichment of the curriculum has too often been a process of adding new facts and new subjects to the already long list of incumbrances included in the curriculum. The contention of this paper is that the time has come to think of

enrichment as a process of revising subjects now in the school program so as to make place for instruction which will stress social values.

Let me repeat a striking illustration which I have used before in the presence of some of you. I once saw a teacher in one of the lower grades interrupt an exercise in penmanship to show the pupils some specimens of the ugly handwriting of contemporaries of Queen Elizabeth. The teacher told the children about the crude writing materials of that day and recounted the fact that there were no schools where common people could learn to write. She did more in the few minutes given to the clumsy writing of the Elizabethan period to inspire those modern children with respect for penmanship and zeal for writing than she could have done in weeks of mere routine. I have often thought that someone ought to collect and reproduce not only examples of uncouth writing of earlier periods but examples of artistic writing that come down to us from the monasteries of the medieval period. These specimens should be accompanied by a brief text describing the romantic story of handwriting, telling how the art has developed to the point where the great majority of the people are now masters of a skill which in early times was possessed only by scribes and princes.

I am not arguing, it will be noted, for an abandonment of systematic, intensive training in the arts of civilization. I am arguing for a reimportation into these arts of that social significance which has often been lost because teachers and pupils are microscopic in their vision, looking only at the task itself and failing to see that each subject in the school is merely the mature stage of one of the fundamental trends of civilization.

It is just at this point that I part company with those who advocate socializing the school through elimination of all systematic subject-matter courses. They would socialize the school by stimulating pupils to cultivate their creative impulses. They lay great stress on drawing, music, and dramatization. The formula for which I am arguing is based on a recognition of the fact that the fundamental movements of civilization depend on systematic thinking, on scientific analysis, on the use of the intellectual arts, not on individual impulse. The doctrine which I am advocating holds that the only

way in which an individual can be successful is to acquire and use what earlier generations have discovered. This doctrine does not invite the individual to create a new social order; it invites him to equip himself with the best modes of thinking now available in order that he may, from this point on, refine the processes by which earlier generations have approximated the goal of good living. A new social order can never ignore the past. If a new social order were to arise tomorrow, it would have to issue its edicts in an alphabet laboriously devised somewhere on the Arabian peninsula. It would have to transport its officials from place to place by means of mechanical devices which have been in process of refinement since the days when primitive man first began to use logs as rollers to move heavy objects. It would have to count its population by the use of numbers, and derive its food from the soil by agricultural arts, more ancient than any existing system of law and more fundamental than any system of economics.

The school is a part of the system of civilized life. It must find a way of transmitting civilization in order that civilization may progress and produce new achievements. When new achievements are attained, they will, in turn, call for broader systems of education to train new generations.

Up to this point I have tried to indicate the direction in which the science of education must develop if it is to provide adequate leadership for the schools. I turn now to a brief consideration of some of the practical steps which can be taken and should be taken by school systems in order to accomplish what has been described as desirable. I recommend that every school system in the United States prepare during the next year one or more reading exercises which will show pupils the social value of a section of the curriculum.

It will be fairly easy to adopt this recommendation and prepare such exercises in the field of geography. The geographers have supplied a great many models for significant social lessons. Charles A. McMurry, with his study of the world's great harbors, made clear the importance of these harbors in establishing international relations and in determining the industrial activities of the regions around the harbors. If teachers in every locality will make a study of the reasons why their communities were established and of the

influences within their communities which issue from the presence or the absence of lines of transportation and communication, geography will continue to take on increasingly concreteness and vividness.

It is to be noted that the recommendation was that the facts ascertained be formulated into permanent reading exercises to be used by pupils. Much of the effort which has been bestowed on enrichment of the curriculum in the past has been wasted because the products of such effort have not been put into permanent form. Furthermore, if school systems will begin to formulate materials of the type here under discussion, exchange will be possible, and, through co-operation, a large body of new material will be added to the somewhat antiquated stock of information which has been retailed in conventional textbooks through many years.

In history it will be nearly as easy as in geography to find interesting material with social significance. Here again, local resources are often plentiful. There is also a wealth of unused library material. Teachers and pupils alike will find it possible to add to the accounts of historical happenings if they will avail themselves of biographies and narratives of the movements which have produced modern social institutions. When history is referred to as a source of new material, one should include under the term "history" some of the material which is classified in the libraries as "anthropology." History was in the making long before written records were thought of. Many of the most interesting conquests which the human race has achieved are to be found in the tools which were invented and perfected before writing came into existence.

There is no field in which pupils of the present age could more appropriately be instructed than the field of technology. Our industrial system with its social implications has become so complex that anyone who does not gain some insight into technology is sure to be bewildered by present-day machinery and its overwhelming influence on individual happiness and life. Complex technical contrivances have a fascination for young people which is too often overlooked when teachers are trying to find reading materials which will help to cultivate ability to gain information independently from the printed page.

Teachers of language have unlimited opportunities to teach ex-

plicitly the social importance of communication. It is interesting to note that the Russians, in their effort to establish a new social consciousness among their people, selected the story of writing as the subject of a social reader. The derivation of words is a revelation to anyone who will use words as a means of understanding civilization. Take a single illustration. The word "pen" is derived from the Latin *penna*, which means a "feather." The quill pen of early times has left its mark on modern civilization by giving us a name for a writing instrument which no longer has anything but historical relations to the feather.

Some day our schools will outlive the tradition which has made language study a laborious grind. I have never been able to understand why language teachers have not more generally recognized the possibility of enlivening their subject by reference to the fact that back of every change in language there have been human minds at work striving to express ideas. If you will allow me a personal reference, I can testify that I never conceived of Latin as a medium of human communication until late in my student career when I was introduced to Cicero's personal letters. I have often wondered why those letters have not been substituted by some intelligent teacher for the intricate legal orations which are commonly perpetrated on innocent young people. Better still, according to my way of thinking, would be a course on language which explains what the Romans were doing when they declined nouns. It is certainly confusing to an American child who knows no declension form except in the possessive case to be plunged into a collection of declension endings with no explanation of why the Romans had so elaborate a group of language forms.

My illustrations should not be allowed to distract you from the recommendation which they are intended to reinforce. I recommended that the curriculum be socialized by bringing out the implications of everything which we teach. I am prepared to urge this recommendation even though its adoption necessitates great reductions in the present contents of each subject. I believe we shall be much better off in modern life if pupils know fewer facts and understand more fully the meaning of the facts they know. There is today a breathless haste in most of our schools in "covering ground." We

seem to assume that pupils will never learn anything after they leave us. Unfortunately, our methods of conducting schools are such that the pupils commonly live up to the assumption that intellectual acquisition stops at graduation—or even earlier. Facts are fairly easy to acquire. A point of view which looks for the social implications of every fact is by no means easy to acquire. Let the schools teach such facts as they can, but let no school fail to put each fact in its setting as a phase of civilized experience. If we can graduate from schools pupils who have the social point of view, the future will be much safer than it will be if we merely teach uninterpreted facts.

There are large possibilities of constructive readjustment of teaching in the field of mathematics. I have referred to arithmetic, to Arabic numerals, to weights and measures. I might add that time-telling, with its basal figure twelve instead of ten, is one of the romances of civilization. Algebra and geometry have baffled many generations of high-school pupils. Now and then some teacher of these subjects adds, while rushing through the topics which must be covered in the semester or the year, something that makes these higher branches of mathematics seem interesting to human beings. It would be a proper demand to impose on every teacher of mathematics that he make clear to his pupils, by interesting reading materials supplementary to the barren textbooks by means of which these subjects are now taught, the effects on society of the use of the equation and the nature of a civilization which must measure land because it is one of the most fundamental kinds of property.

Somewhere in the general field of mathematics pupils should be given the opportunity to learn the meaning of money. One of the curious omissions of the modern curriculum is that it offers no enlightenment on the one group of facts to which adult life devotes its major attention. Children read the history of money with great interest when proper materials are supplied for their use. They will be engaged all their lives in the effort not to be mastered by money, that symbol of power, the reward of labor. Perhaps it is too much to ask of the schools that they explain the full social influence of money. It is at least legitimate to ask that money be not disposed of summarily in a table of denominate numbers.

Illustrations of the type which I have been presenting should be

supplemented by some reference to the natural sciences. As these sciences are now taught, they usually consist of facts detached from the human beings who discovered them and from the human beings who will use them. "Science for its own sake" is the slogan adopted by many who teach the natural sciences in the schools. It may be that there is a stage in scientific inquiry where human factors must be minimized, but this stage has certainly not been reached in the elementary school and the high school. The lower schools, at least, may properly think of the natural sciences as man's method of viewing the world in which he lives.

The kind of revision of the curriculum which I have attempted to describe will not be acceptable to the adherents of academic tradition. They will say that this program sacrifices the subjects to a degree which endangers their scholarly qualities. Nor will this kind of revision satisfy the extremists who want to do away with all subjects in favor of a child-centered program. The defense which I offer against both the conservatives and the radicals is that the socializing curriculum is the curriculum which the science of education shows to be valid.

An approach to the kind of revision which I have suggested was made some years ago by the Herbartians. They advocated a new curriculum for schools in which the various subjects of instruction were grouped around a central core subject having large social significance. The core subject was some form of history.

My objection to the Herbartian program is that a core subject is, after all, distinct from the other parts of the curriculum. I have not advocated a separate or separable core. I have advocated a curriculum permeated throughout with the spirit and substance of social teaching. The definition of the school which was presented earlier in this paper as the definition resulting from a scientific analysis of education states that the school is society's agency for socializing individuals. The school is not society's agency for informing individuals about a host of isolated facts. It is not society's agency for giving children a number of skills. It is not society's agency for cultivating children's instincts. It is not society's agency for relieving parents of the care of their children. The school may, indeed, serve society in many collateral ways, but its major function is one which in the

past has been far too largely neglected. The school has become absorbed in tasks which are not of primary importance.

One final comment and I shall bring this paper to a close. A number of very useful examples have of late been published showing what can be done along the lines which have been recommended. In 1930 Purdue University published a booklet of seventy pages devoted to *The Story of Wheat.* This booklet is more extended than the lessons which I have been recommending, but it shows admirably what can be done to provide reading material of large social significance to young people in the schools. Recently the Committee on Materials of Instruction of the American Council on Education published booklets on a number of achievements of civilization—on the alphabet, on the number system, on weights and measures, on the calendar, on time-telling, and on the way in which custom passes into law as shown in the development of rules governing traffic. The American Education Press, Inc., of Columbus, Ohio, has published a series of booklets under the title "Modern Problems Series." These booklets discuss current topics, such as the depression and economic planning.

All these contributions to social thinking are so stimulating that they should be brought to the attention of teachers. If there could be a general movement throughout the educational system of this country in the direction pointed by these recent publications, the resulting new curriculum would be saved from the deficiencies which have been revealed by the foresight of the reformers of the nineties and by tests and measures. The new curriculum would meet the demands which have been imposed upon the schools by the expansion of pupil populations. The new curriculum would meet more adequately the requirements of modern civilization. The new curriculum would exhibit a new type of vitality, resulting from the discovery of a method by which constant additions can be made to the materials of instruction. Through a new curriculum thus constructed, the schools will contribute to the conservation of all that is best in the present social order and to the reconstruction of social practice in the interests of the social order of the future.

HOW STUDENTS REVIEW FOR OBJECTIVE AND ESSAY TESTS

PAUL W. TERRY
University of Alabama

THE PROBLEM

During the last decade or so many teachers, both in public schools and in higher institutions, have learned to use objective tests. Some, in their enthusiasm for the new techniques, have altogether discarded the traditional essay test. Large numbers of teachers, on the other hand, including some who are familiar with objective tests and many who are but little acquainted with them, still rely exclusively or almost exclusively on essay tests. Other teachers use both types.

The problem with which this report is concerned is as follows: Which of these three courses of action on the part of the teacher is best for his students? One way of attacking the problem, possibly one of the most significant ways, is to observe the methods of study which students employ in reviewing for tests. (1) Are their methods the same for both types of tests, or do they employ one set of methods for essay tests and another set for objective tests? (2) If different methods are employed, then it is pertinent to inquire whether the methods of review employed for either type of test have so little value that teachers can discontinue the use of that type without neglecting the best interests of their students. Throughout this investigation it has been assumed that methods of study constitute one of the most important kinds of learning at any level of instruction.

In an attempt to answer these questions, the following line of attack was devised. The members of two sections in a course in educational psychology at the University of Alabama, Sections 63 A and 63 B, which include Juniors and Seniors, were informed in April, 1932, that an objective test would soon be given and that an essay test would be given the following month. To refresh their minds on

each occasion, the instructor gave them several statements or questions representative of the type of test to be expected and invited them to consider the methods of reviewing which would be most helpful for a test of that type. The instructor then raised the question of the comparative values of the two types of tests and elaborated on the idea that these values depended, in part at least, on the methods of reviewing which students employed. He asked the students to make notes on the methods of study which they employed in their reviewing and to hand in the written notes at the next class meeting after the test.

From these reports the instructor drew up a list of sixty-seven methods of reviewing for tests (Lists A, B, C, and D which follow) classified under the six heads given in List D. These methods were presented to Sections 63 A and 63 B in the form of a check list and later to two sections in a course in tests and measurements, Sections 67 A and 67 B, consisting of Juniors and Seniors, and to two sections in general psychology, Sections 2 D and 1 A, consisting mainly of Freshmen and Sophomores. In the directions that accompanied the check list, the students were asked to be guided by their actual practice in reviewing for a test when they knew in advance the type of test to be given. They were asked to check every method in one, but in only one, of five columns, as follows: in Column I, the methods "you do not use or very seldom use"; in Column II, those "you consider best adapted to the essay test"; in Column III, those "best adapted to the objective test"; in Column IV, those "equally well adapted to both essay and objective tests"; and in Column V, those "poor for both types of tests."

The reliability of the check list was determined in the case of fifty-nine individuals (every fourth paper) by correlating the split halves of the sixty-seven items. The correlation data in each case consisted of the number of checks in each of the split halves placed in Column II and in Column III combined. When the correlation of +.833 obtained by the Pearson product-moment formula was stepped up with the Spearman-Brown "prophecy formula," the coefficient was found to be +.924. In view of this result and of several additional internal evidences, which need not be mentioned here, it seems reasonable to believe that the data are fairly reliable.

DO STUDENTS STUDY DIFFERENTLY FOR ESSAY AND OBJECTIVE TESTS?

The first aspect of the problem to be attacked lies in the question: Do students employ the same or different methods in reviewing for essay and objective tests? Data on this question are found in Table I. It is seen that the average student considered 9.5 of the 67 meth-

TABLE I

AVERAGE NUMBER AND PERCENTAGE OF CHECKS PER STUDENT PLACED IN EACH OF THE SEVERAL COLUMNS

SECTIONS	AVERAGE OF CHECKS IN COLUMN											
	I Do Not Use		II Better for Essay Test		III Better for Objective Test		II and III Total for Essay and Objective Tests		IV Equally Good for Both		V Poor for Both	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
63 A and B (78 students)	19.6	29.3	11.9	17.7	8.0	11.9	19.9	29.6	24.9	37.2	2.6	3.9
67 A and B (48 students)	21.1	31.5	8.8	13.1	5.4	8.1	14.2	21.2	29.1	43.4	2.6	3.9
2 D (50 students)	25.5	38.1	6.5	9.7	8.1	12.1	14.6	21.8	23.9	35.7	3.0	4.5
1 A (60 students)	21.5	32.1	9.5	14.2	5.1	7.6	14.6	21.8	28.0	41.8	2.9	4.3
All sections (236 students)	21.6	32.2	9.5	14.2	6.7	10.0	16.2	24.2	26.3	39.3	2.8	4.2
Range of number of checks	1–59		0–42		0–28		0–48		0–58		0–14	

ods best adapted to the essay test and 6.7 methods best adapted to the objective test. The sum of these two columns shows that the average student considered 16.2 methods better for one type of test than for the other. Of the total number of checks (15,812) given by the 236 students, 24.2 per cent were placed in Column II or in Column III. The outstanding fact presented in Table I is, then, that approximately one-fourth of the total number of judgments recorded indicate discrimination as to the effectiveness of different methods of study for essay and for objective tests. When consideration is given to the fact that 32.2 per cent of the checks were placed in the

"Do not use" column, the extent of discrimination looms larger; of the 67.8 per cent of the checks placed in the other columns, that is, in those columns indicating use, 36 per cent were located in Column II or in Column III.

Further light on the extent of discrimination is given by the number of individuals who checked few methods in Columns II and III. A tabulation not presented here showed that only 4 per cent of the students failed to check any of the methods in these columns. Such students apparently employ the same methods of study regardless of the type of test for which they are reviewing. Further examination showed that 8 per cent of the students checked two methods or less, that 9 per cent checked from three to five methods, and that only 17 per cent checked less than six methods in these columns. In other words, 83 per cent of the students made six or more discriminating judgments on the 45.4 methods checked as used by the average student. It may be said, therefore, that discrimination between methods of study effective for essay tests and those effective for objective tests is characteristic of a decided majority of these 236 students. Discriminating attitudes of this kind must be taken into account if the instructor is intelligently interested in what his students learn, since the learning must inevitably be affected by the methods which they employ in reviewing for his tests.[1]

Table I shows that Sections 63 A and B made a larger percentage (29.6) of discriminating judgments than any of the other sections. It was pointed out in the introductory paragraphs that the problem originated in Sections 63 A and B and that its significance was explained to them more fully than to the other sections. Although the explanation was given without expression of opinion on the part of the instructor as to the value of discriminating attitudes or the effectiveness of any method for either type of test, the issue undoubtedly assumed a greater significance in these sections. This factor alone, as far as the writer knows, distinguishes Sections 63 A and B from the other sections. When the probable error of the difference (8.4) between the mean percentage of checks placed by these sections

[1] The data in this report are not concerned with the methods which students employ in studying new material. It is not unlikely, however, that these methods also are affected by the nature of the tests which the instructor gives.

in Columns II and III combined (29.6) and that of Sections 67 A and B (21.2) was calculated, it was found to be 1.68. In other words, the difference between the means is greater than can be accounted for by errors in sampling. This fact appears to warrant the conclusion that the tendency of students to discriminate as to the effectiveness of different methods of study for the two types of tests is greater when the question has been made an issue of considerable importance with them.

WHICH METHODS ARE BEST ADAPTED TO OBJECTIVE AND TO ESSAY TESTS?

The fact of discrimination having been established, the following question is next in order: Which methods were considered best adapted to objective tests and which to essay tests? This question can be answered in the case of the objective test, for example, by finding which methods were checked most frequently in Column III. Each method was checked once by each of the 236 subjects. The percentage which the number of checks in each column was of 236 was calculated for each method. The percentages in Column III (favoring the objective test) were then distributed, and the quartiles were calculated. In Column III the upper quartile was 13.1 per cent. The sixteen methods which had higher percentages than 13.1 in Column III are presented in List A; those having higher percentages than 19.2 in Column II are given in List B; and those with percentages above 54.4 in Column IV are incorporated in List C. In order that all the methods in the original check list may be available for examination, the remaining twenty-six methods are given in List D.

List A. Methods of Review Considered Best Adapted to Objective Tests

1. Look chiefly for details in reviewing a chapter.
2. Underscore striking words or phrases while reviewing.
3. Notice (mentally) words or phrases that appear to be especially significant.
4. Learn the meanings of unfamiliar terms.
5. Write out a list of the authors of experiments described in the textbooks.
6. Associate the name of the experimenter with the subject of his experiment.
7. Try to understand the meaning of each sentence in the textbook.

8. Practice recalling the key sentences of paragraphs while reading.

9. Pay special attention to examples or applications in the textbooks of important principles, rules, laws, etc.

10. Read, recall, recite, or memorize series of related items such as lists of principles, rules, laws, steps in a process, etc.

11. Underscore the most important sentences while reviewing.

12. Review the material a second time concentrating on the underscored passages.

13. Review the material a third time concentrating on the underscored passages.

14. Write out and mark a few objective-test statements for practice.

15. Write out and mark a large number of objective-test statements covering comprehensively the material included in the textbook.

16. While reading, consciously look for sentences which appear likely to be selected by the instructor as suitable material for objective-test statements.

The nature of the methods of reviewing which students consider most efficient in preparing for objective tests is a matter of considerable importance both to the teachers who use tests of this kind and to technical workers in the field of tests and measurements. The most striking characteristic of such methods of study, as they are described in List A, is their emphasis on details. More than one-half of the methods mentioned, including Methods 1–8, 11, and 16 (if not others, such as Methods 9, 12, 13, and 14), are concerned with small units of subject matter, such as words, phrases, and sentences. If the student uses methods of this kind too consistently, he risks the possibility of acquiring the vice of shallowness or superficiality. Lest this point be too heavily stressed, however, it should be noted that four of the methods in List A (Methods 5, 13, 14, and 15) were frequently checked in Column I ("Do not use"), presumably because these methods require persistent endeavor or laborious writing.

The judgments of the students who participated in this investigation were based necessarily on the kinds of objective tests with which they were familiar. All had had considerable experience with true-false, completion, and simple-recall questions and some experience with matching and multiple-choice questions. Thus, their experience is probably very nearly like that of other students whose instructors employ the common types of objective tests in ordinary practice.

Most teachers, it would seem safe to say, consider it profitable

that the members of their classes work to learn details, or some details at least, during a part of the time they devote to reviews. The objective test is a powerful incentive to do this kind of work. When teachers deem it profitable for their students to search zealously for small units of subject matter, they possess in the objective test an instrument nicely adapted to that end. However, the enthusiast who uses objective tests only should be equally concerned about the methods of reviewing which the objective test does not emphasize. These are found in List B.

LIST B. METHODS OF REVIEW CONSIDERED BEST ADAPTED TO ESSAY TESTS

17. Look chiefly for the main points in reviewing a chapter.
18. When beginning the review of a chapter, quickly get a preliminary general idea of the topics covered in the chapter.
19. Write out the related ideas or general topics which are discussed in more than one chapter of the textbooks.
20. Organize related chapters into groups (mentally), and think over their relationship.
21. Compare or relate the main ideas of one chapter with those of another.
22. Write an outline of each chapter including main topics and subtopics of one's own selection.
23. Study the written outline of a chapter as an integral unit or whole.
24. Try to recall or recite the subtopics of a chapter in one's own words.
25. Run through a chapter attempting to recall or recite the main points under the center-heads and side-heads.
26. Examine carefully concluding summaries at the ends of chapters.
27. Summarize (mentally) the thought of related paragraphs.
28. Try to apply important principles, rules, etc., to the experiences of everyday life.
29. Write out selected items, such as definitions, conclusions of experiments, outstanding facts, etc.
30. Form an idea of the meaning of each paragraph.
31. Re-read difficult passages.
32. Write out a number of plausible essay questions, and answer them.

The outstanding characteristic of the methods in List B is their emphasis on the study of large units of subject matter.[1] Methods

[1] The reader may be interested in the fact that, in a similarly conducted investigation, report of which will appear in an early issue of the *Journal of Educational Research* under the title "How Students Study for Different Types of Objective Tests," students considered several of the methods in List B, such as Methods 17, 18, 22, and 23, well adapted to review for the listing-recall type of objective test.

17, 18, 19, 20, 21, 22, 24, 25, and 26, for example, mention such items as "main points," "main ideas," "general ideas," "related ideas," "main topics," "side-heads," and "summaries." The methods describe the treatment of entire chapters or groups of chapters as wholes (Methods, 18, 19, 20, 21, 22, 23, 25, 26). They call for writing, outlining, summarizing, and the application of principles to experience —all of which are difficult, penetrating, and time-consuming but valuable methods of intellectual work. However, four of these methods (Methods 21, 22, 24, and 32) were checked by many students in Column I ("Do not use").

All conscientious, trained teachers probably consider it profitable for the members of their classes to use several, if not all, of the sixteen methods of reviewing described in List B. The use of carefully prepared essay tests tends to accomplish this purpose. Recognition of facts such as these and of those brought out in connection with List A (vague or "intuitive" information as in many cases it may be) very likely accounts, in part at least, for the exclusive devotion of numerous conservative teachers to essay tests. To the enthusiastic user of objective tests who has altogether abandoned essay tests, these facts provide food for much thought. The only course of action that will commend itself to the teacher who values the methods of study described in both Lists A and B, if the interpretations made are accepted, is to include both essay and objective tests in his instructional plans. The same conclusion has been reached by Sims[1] through an analysis of the influence of the teaching-testing situation on the validity of the extensive sampling theory, which has been advanced in justification of the exclusive use of the objective test.

List C includes the nine methods which were considered equally well adapted to both essay and objective tests. Most of these methods seem to be more concerned with the selection of material (Methods 33, 34, 35, and 36, for example) or with the proper time to review (Methods 39, 40, and 41) than with methods of attacking material. Many students, one may infer, would use the methods in List C combined with those of either List A or List B, depending on whether the test announced was to be of the objective type or the essay type.

[1] Verner Martin Sims, "Objective Tests and Teachers' Measurements," *School and Society*, XXXVI (September 3, 1932), 300–302.

LIST C. METHODS OF REVIEW CONSIDERED EQUALLY WELL ADAPTED TO OBJECTIVE AND ESSAY TESTS[1]

33. Pay special attention to points recognized as having been discussed in the classroom.

34. Spend most of the time studying things with which one is not familiar.

35. Review mimeographed sheets of problems, exercises, or directions for study distributed when chapters were first assigned.

36. Review notes taken in the classroom.

37. Look up in the textbooks points in one's outlines which cannot be recalled readily.

38. Conclude preparation for the test with a final review of one's outlines.

39. Read over underscored passages in the textbooks—not long before going to the test.

40. Re-read notes taken in the classroom—not long before going to the test.

41. Review parts in the textbooks which cannot be recalled—not long before going to the test.

It may be mentioned in passing that some students reported that they study in the same way regardless of the nature of the test for which they are preparing. Indeed, nine of the students (4 per cent) who participated in this investigation checked none of the methods in either Column II or III. Mastery of the subject matter, some of these asserted, is their chief aim in taking a course, and they pay little attention to the kinds of examinations which are given. Although this report shows that few students actually carry it out, the merits of this plan of study appear to deserve further investigation.

The remaining twenty-six methods are presented in List D.

LIST D. METHODS ON THE ORIGINAL CHECK LIST NOT INCLUDED IN LISTS A, B, AND C[2]

UNDERSCORING

42. Concentrate in reviewing on passages in the textbooks underscored previously, that is, when the material was first assigned.

WRITING—APART FROM OUTLINING

43. Write down underscored passages that are difficult to recall.

44. Make marginal notes on the pages of the textbook.

[1] On the basis of the percentages of pupils who considered these methods equally well adapted to objective and essay tests, Methods 4, 6, 9, 10, and 12 in List A and Methods 17 and 31 in List B should also be included in List C.

[2] The headings in List D are those under which the sixty-seven methods were classified in the original check list to aid the student in checking.

45. Fill out or rewrite important notes taken in the classroom.

46. Write out selected series of related items such as lists of principles, rules, laws, steps in a process, etc.

47. Draw diagrams or charts of facts or ideas which can be organized in this way.

OUTLINES

48. Write a skeleton outline of each chapter, including only the center-heads and the side-heads found in the textbook.

49. Write a full outline of each chapter, including the center-heads and side-heads in the textbooks and the main points under each head.

50. Recall or recite the main points under the subtopics of one's outlines.

51. Study chapter outlines written before beginning the review for the test.

52. Memorize one's outlines.

MENTAL TREATMENT—WITHOUT UNDERSCORING OR WRITING

53. Recall or recite various unrelated or isolated facts, rules, definitions, etc., after reading a chapter.

54. Digest the findings of experiments.

55. Review the tables or the charts in the textbooks to get the main ideas of each.

56. Memorize important selected passages.

57. Try to recall or recite the center-heads and side-heads of each chapter.

58. Read the table of contents, attempting to recall or recite the main points under each subtopic.

VARIOUS SPECIAL METHODS

59. Carefully read the entire text of a chapter through from beginning to end.

60. Study with one or more members of the class.

61. Consult other members of the class as to what questions are likely to appear on the test.

62. Start at the end of each chapter and study backwards.

63. Try to evaluate the chief ideas or principles as regards their usefulness to one's self.

64. Try to "spot" questions which the instructor is likely to ask.

FINAL REVIEW—NOT LONG BEFORE GOING TO THE TEST

65. Skim over the text of each chapter.

66. Read over the center-heads and side-heads of each chapter.

67. Review one's chapter outlines.

Eight of these (Methods 45, 47, 48, 49, 52, 57, 58, and 62) were among the sixteen most frequently checked in Column I ("Do not use"). Most of these methods demand hard work. Six others (Meth-

ods 56, 59, 60, 61, 64, and 65) were among the sixteen most frequently checked in Column V ("Poor for both types of tests"), and most of these would appear to have been advisedly checked there. The twelve remaining were not given exceptional attention in any of the five columns.

INDIVIDUAL DIFFERENCES IN DISCRIMINATION

It will be illuminating to examine more closely a few individual cases. The variation of individual students with respect to the ex-

TABLE II

INDIVIDUAL DIFFERENCES DISPLAYED BY SIX STUDENTS IN DISCRIMINATION OF METHODS BEST ADAPTED TO OBJECTIVE AND TO ESSAY TESTS

STUDENT	PERCENTAGE OF THE SIXTY-SEVEN CHECKS PLACED IN COLUMN					
	I Do Not Use	II Better for Essay Test	III Better for Objective Test	II and III Total for Essay and Objective Tests	IV Equally Good for Both	V Poor for Both
G	45	0	0	0	46	9
H	6	5	3	8	86	0
I	24	14	10	24	36	16
J	28	63	9	72	0	0
K	15	46	21	67	13	5
L	42	3	42	45	12	2
Lower quartile*	21.1	6.1	5.8	15.0	30.1	2.2
Median*	31.1	13.3	9.1	24.0	38.3	4.3
Upper quartile*	43.4	22.2	15.3	34.5	48.8	7.8
Range*	2–87	0–63	0–42	0–72	0–86	0–21

* Based on distributions for all 236 students.

tent of their discrimination of methods of reviewing may be observed in Table II. In this trait, as in all others, the range of differences is very wide (from 0 to 72 per cent). The first two students, G and H, make little or no discrimination (0 and 8 per cent). These represent the comparatively small number of students who study in the same manner regardless of the nature of the test. Student I stands near to the median practice (in Columns II, III, II and III, and IV). The last three students exhibit (in Columns II and III combined) an extent of discrimination much above the upper quartile. Student J emphasized the essay test (63 per cent) in his checking; student L,

the objective test (42 per cent); and Student K, both tests (46 and 21 per cent).

As a part of the question of individual differences, the relation of intelligence and of scholarship to discrimination arises. Seventy-five members of Sections 63 A and 63 B, in which the amount of discrimination was greatest, were given the Otis Group Intelligence Scale, Advanced Examination, Form A. The correlation by Pearson's product-moment formula of these raw scores with the corresponding percentages in Columns II and III combined (the measure of discrimination) was found to be $-.04$. Similarly, the correlation of the extent of discrimination with the final grades in psychology was found to be $-.07$. That is to say, bright students and superior scholars discriminated little in some cases and in others, much. Dull students and poor scholars likewise discriminated both much and little. Those students who vary their selections of methods according to the type of test they expect are as intelligent and they achieve as much in scholarship as those who study in the same way regardless of the type of test they expect. The wide ranges in brightness (83–205) and in achievement (F to A) must be accounted for by other factors, such as the zeal, the persistence, and the skill with which the student uses whatever methods he employs.

Although the subjects of this investigation included only college students in psychology classes, the conclusions which have been derived from it, as far as the writer can see, are not without implication for lower levels of instruction and other subjects of study in which both essay and objective tests are practicable. Until the contrary has been shown, it seems reasonable to believe that the study behavior of pupils in junior and senior high schools, especially in the so-called "content subjects," is influenced to a significant extent by the teachers' selections of tests.

THE TEACHING QUOTIENT

L. C. DAY
Superintendent of Schools, South Portland, Maine

A long search for an objective measure of teaching merit, acceptable alike to teacher and supervisor, has led the writer to the teaching quotient, or "T.Q." This measure is based on the results of annual group achievement tests administered late in the school year, due allowance being made for the ability of each group tested. The purpose of this article is to describe this measure of teaching success and to indicate how it has been employed in two school systems.

First, a grade quotient, "G.Q.," is obtained for each class in the usual manner—by dividing the median or the mean class score by the standard score for the grade. Thus, one sixth-grade group may secure a G.Q. of 103 in paragraph meaning, 108 in word meaning, 96 in dictation, and so on. As a median intelligence quotient has been prepared for each group, the next step is to find the difference between the median I.Q. and 100 by subtracting the smaller from the larger. The remainder thus obtained is then *added* to the G.Q. if the I.Q. is *less* than 100; it is *subtracted* if the I.Q. is *more* than 100. The final result is the T.Q. For example, if a class has a median G.Q. of 98 and a median I.Q. of 94, the difference between 94 and 100 (6) is added to 98, a T.Q. of 104 being thus obtained. On the other hand, if the median G.Q. of a class is 105 and its median I.Q. is 108, the difference between 108 and 100 (8) is subtracted from 105, a T.Q. of 97 being thus obtained. The first teacher is shown to be the more efficient of the two, her T.Q. being 104 compared with the other teacher's T.Q. of 97, even though the achievement of her class in terms of G.Q. is only 98 compared with the second teacher's 105. The slower group has been led to accomplish better work than one would normally expect, while the brighter group, though doing well, has not been led to do as good work as it should have done. The T.Q. formula aims, on the one hand, to offset through credits the handicap un-

der which the teacher of a slow group is working and, on the other, to offset through debits the advantage enjoyed by the teacher of a bright group.

Strictly speaking, the teaching quotient is not a quotient. It is more accurately described, perhaps, as a "teaching index." However, as *Q* is a convenient and popular letter in testing parlance and as "T.I." is relatively awkward, "T.Q." has in practice proved to be the most effective label for this measure.

A T.Q. of 100 is considered to represent average or "good" teaching, while 110 has been tentatively set as the mark of superior accomplishment. This quotient should be the goal of every teacher priding herself on the quality of her work. A T.Q. of 90 has been chosen tentatively as the lower limit of "acceptable" teaching. A rating of less than 90 indicates poor work, and a careful analysis of the teaching situation is in order to determine where the weakness lies—whether in methods, materials, or in the teacher herself. If, for example, a teacher secures a particularly low rating in some subject in which most of the other teachers of a school system excel, the weakness is presumably her own. On the other hand, if every teacher in a system secures a low T.Q. in a single subject, it is probable that the difficulty rests in the method or the materials. Sometimes, however, even when a system lacks certain vital materials, the T.Q. will show that the more resourceful teachers still do superior work. A case in point is that of a group of twelve fourth-grade teachers, all equally handicapped by inadequate materials for the teaching of history and civics. The most resourceful member of the group obtained a T.Q. of 121; another teacher, decidedly less resourceful, registered a T.Q. of 34.

The T.Q. "yardstick" has been successfully applied for three years in two school systems with which the writer is familiar. Subject T.Q.'s have ranged from 34 to 136, while the mean T.Q.'s of individual teachers have ranged from 87 to 117. The mean T.Q. of the teachers in one of the two systems was 106; in the other, 99. It is possibly significant that the teachers of the first system had had the benefit of a systematic testing program for three years, while in the second system the testing program had only just been initiated.

The T.Q.'s of teachers of classes from the third to the eighth

grade, inclusive, have indicated with a high degree of accuracy how well the teachers are "putting across" their subjects. The T.Q.'s of second-grade teachers have so far proved somewhat unsatisfactory because the measures have tended to be erratic. When the children are very young, every bit of instruction which a teacher succeeds in making effective is relatively such a large addition to the pupil's stock of knowledge that it causes the T.Q. to jump upward amazingly. On the other hand, if the teacher fails in her message, the T.Q. falls at a correspondingly rapid rate. This behavior of the T.Q. in

TABLE I

T.Q. SUBJECT RATINGS OF FOUR TEACHERS OF VARYING DEGREES OF TEACHING ABILITY

Subject	Superior Ability	Mediocre Ability	Consistent Ability	Erratic Ability
Paragraph meaning	114	101	104	104
Word meaning	120	101	111	101
Dictation	108	88	102	91
Language usage	120	86	99	83
Literature	112	86	111	99
History and civics	112	91	106	34
Geography	117	90	99	97
Hygiene	111	98	99	75
Arithmetic reasoning	113	94	100	102
Arithmetic computation	136	90	101	90
Mean	116.3	92.5	103.2	87.6

the lower grades gives new emphasis to the importance of having especially well-qualified teachers during the pupils' first years of school life.

The policy has been to furnish each teacher with her own subject T.Q. ratings after the spring tests have been given and scored. Knowing the three important milestones on the T.Q. scale (90, 100, and 110), she can quickly see where her own strong and weak points lie. The T.Q. ratings are thus made the starting point for the next year's improvement. A few typical ratings are given in Table I.

The T.Q. has been used in the two school systems concerned as one of several elements entering into the judgment of a teacher's merit, and its objective nature makes it important. The teachers who have been rated on a T.Q. scale have generally been impressed

by the fact that the procedure is impartial and unprejudiced, unlike the purely personal methods of determining a teacher's worth. Certainly, the ratings have proved most valuable incentives to teachers to strive vigorously to better their records the following year. For example, one group of teachers improved their mean ratings in dictation (spelling) 6 points (from 95 to 101) and in language usage 9 points (from 100 to 109). Some individual teachers who were doing only fair work the first year made marked improvements. One T.Q. in arithmetic computation rose from 89 to 99; one in word meaning, from 91 to 101; one in dictation, from 75 to 98; while one teacher, who had had considerable difficulty at first in teaching silent reading, increased her T.Q. in paragraph meaning from 79 to 108. This teacher took her unacceptable rating seriously, and the following year she saw to it that she surpassed the acceptable and the standard ratings, raising her T.Q. to practically the superior level.

Ordinarily the T.Q. is used to measure a teacher's accomplishment with a class or a grade, and thus it concerns group results. It may also be applied, however, to individual cases, as when one wishes to measure a teacher's instructional success with a certain problem pupil, with a particular bright or dull pupil, and in other special cases. Some interesting data on the T.Q. are being accumulated which show the relative success of different teachers with bright and dull pupils. The T.Q. may be used as a measure in any course or at any level above the second grade. It can be applied wherever a standardized test with definite grade norms is available.

GEOGRAPHICAL MATERIALS CONTAINED IN READERS FOR THE FIRST THREE GRADES

AGNES G. GUNDERSON
University of Wyoming

A study of school curriculums reveals the fact that geography is not listed as a separate subject in the first, second, and third grades. In these grades geographical information or knowledge is gained only incidentally. Stories containing geographical ideas are a part of the reading materials for the several grades. This study is an attempt to show the relative importance of geographical materials in readers for the primary grades. It is of interest to the teacher of geography to know the amount and the kind of geographical information which the child has acquired in his reading and the geographical terms and concepts with which he has come in contact when he begins the formal study of geography. If certain topics, such as the home and the clothing of the Eskimo, have been adequately covered in the reading materials in the second or the third grade, the teacher of geography would probably need to give only a summary or a review of such topics.

In order to ascertain these geographical facts and concepts the writer analyzed the following ten series of readers used in the first three grades in the elementary school.

Marjorie Hardy, *The Child's Own Way Series.* Chicago: Wheeler Publishing Co., 1926.

Mary E. Pennell and Alice M. Cusack, *The Children's Own Readers.* Boston: Ginn & Co., 1929.

Frank N. Freeman, Grace E. Storm, Eleanor M. Johnson, and W. C. French, *Child-Story Readers.* Chicago: Lyons & Carnahan, 1927.

Margaret L. White and Alice Hanthorn, *Do and Learn Readers.* Chicago: American Book Co., 1930.

William H. Elson and William S. Gray, *The Elson Basic Readers.* Chicago: Scott, Foresman & Co., 1930 and 1931.

Henry Suzzallo, George E. Freeland, Katherine L. McLaughlin, and Ada M. Skinner, *Fact and Story Readers.* Chicago: American Book Co., 1930 and 1931.

Albert C. Lisson and Evelyn V. Thonet, in collaboration with Emma Grant Meader, *The Happy Childhood Readers*. Dansville, New York: F. A. Owen Publishing Co., 1930.

Anna Dorothea Cordts, *The New Path to Reading*. Boston: Ginn & Co., 1929.

Mathilde C. Gecks, Charles E. Skinner, and John W. Withers, *Story and Study Readers*. Richmond, Virginia: Johnson Publishing Co., 1928.

Arthur I. Gates and Miriam Blanton Huber, *The Work-Play Books*. New York: Macmillan Co., 1930.

These series are comparatively recent, all having been published in 1926 or later. The primer, the first reader, the second reader, and the third reader in each set were used in the investigation. Every selection in each reader was read carefully, and the nature of the content was determined by deciding what the story meant to tell or emphasize. In doubtful cases a specialist in geography was consulted. In the identification of terms, concepts, and materials with geographical value, the paragraph was taken as the unit or basis. Concepts, words, and terms were included or excluded on the basis of their geographical nature.

In this study "geography" is defined as man's way of living as shown by his adjustment to his environment in the primitive and undeveloped regions and in the developed regions. In the primitive regions man's adjustment is shown by the type of food he eats, in the material of his clothing and the amount of clothing he wears, in the shape and the material of his home, in his occupation, and in his means of transportation and communication. In the developed regions man's adjustment to his environment is shown, not by his food, clothing, and home, but by his way of making a living and his use of the natural resources.

The extent of treatment was considered in the tabulation. Four types of treatment were considered: (1) bare mention, (2) brief minor mention, (3) extensive minor mention, and (4) major mention. A bare mention is a reference to a geographical place or an event without any explanatory statement, such as "Kit lived in Holland." A brief minor mention of a geographical item is a reference of one to ten lines in length. An extensive minor mention is a continuous account of ten lines or more but not a whole story. A

major mention of a geographical item is an entire selection in which the geographical item is the central topic.

All geographical items were tabulated on cards, one word or term on a card. Each mention, the type of mention, the name of the book, and the page or pages on which the item appeared were recorded. Parts of pages were expressed in percentages of an entire page. The number of lines on the portion of the page was divided by the number of lines on a full page in that particular book. The number of pages of illustrations was determined in the same way. The number of inches of illustrations on the portion of the page was divided by the number of inches in a full-page illustration. Test questions and seat-work material given at the ends of stories were disregarded.

The percentages of geographical materials in these readers, which are shown in Table I, range from 0.0 in fourteen books to 48.9 in the second reader of the *Child's Own Way Series*. Only sixteen books of the forty analyzed give as much as 10 per cent of the space to geographical materials. Only three books devote as much as one-fourth of their space to geographical materials. Five of the ten series of readers studied contain no geographical selections in readers for the first grade. Opinion as to whether geographical materials should be given for the first grade seems to be divided. Every series includes geographical materials for the second grade, the number of selections varying from one to sixteen. All third readers in this study contain geographical selections, the number ranging from four to twenty-four.

Table II shows the distribution of geographical materials in the first three grades. There is an increase from grade to grade in the amount of geographical material included in readers. The amount of geographical material in the forty books examined is 677 pages. More than half the geographical materials for the first three grades is found in the readers for the third grade.

Attention was given to the types of materials and the topics covered in the geographical selections. Table III shows that the prose selections make up 72.4 per cent of all the geographical materials in the forty books examined. Pictures or illustrations are next with a percentage of 26.2. These two types of material constitute 98.6 per cent, or practically the entire amount, of the geographical

TABLE I

GEOGRAPHICAL MATERIALS APPEARING IN TEN SERIES OF READERS

Name of Series	Total Number of Pages in Book*	Number of Pages of Geographical Materials	Percentage of Geographical Materials
Child's Own Way:			
Primer	111.6	12.8	11.5
First Reader	117.0	1.8	1.5
Second Reader	200.8	98.1	48.9
Third Reader	248.5	95.7	38.5
Children's Own Readers:			
Primer	99.5	0.0	0.0
First Reader	153.5	0.0	0.0
Second Reader	206.6	22.4	10.8
Third Reader	257.9	64.8	25.1
Child-Story Readers:			
Primer	94.8	0.0	0.0
First Reader	101.4	12.3	12.1
Second Reader	204.4	36.7	18.0
Third Reader	291.3	37.2	12.8
Do and Learn Readers:			
Primer	81.6	0.0	0.0
First Reader	133.1	12.5	9.4
Second Reader	208.8	31.3	15.0
Third Reader	227.1	19.8	8.7
Elson Basic Readers:			
Primer	117.0	0.0	0.0
First Reader	148.4	0.0	0.0
Second Reader	200.7	1.0	0.5
Third Reader	251.9	17.1	6.8
Fact and Story Readers:			
Primer	103.0	0.0	0.0
First Reader	123.2	2.2	1.8
Second Reader	171.8	15.8	9.2
Third Reader	187.0	19.5	10.4
Happy Childhood Readers:			
Primer	109.0	0.0	0.0
First Reader	146.5	0.0	0.0
Second Reader	201.8	6.3	3.1
Third Reader	224.6	27.3	12.2
New Path to Reading:			
Primer	134.0	0.0	0.0
First Reader	152.5	0.0	0.0
Second Reader	197.6	2.1	1.1
Third Reader	220.1	23.3	10.6
Story and Study Readers:			
Primer	89.0	0.0	0.0
First Reader	94.5	0.0	0.0
Second Reader	141.6	26.6	18.8
Third Reader	177.4	34.2	19.3
Work-Play Books:			
Primer	85.8	18.3	21.3
First Reader	121.7	0.0	0.0
Second Reader	167.4	9.9	5.9
Third Reader	242.2	28.0	11.6

* The figures in this column represent the number of full pages of subject matter (content and illustrations) exclusive of test questions, seat-work material, and parts of pages left blank.

material offered. Maps, which constitute an important part of the materials in the formal study of geography, are not usually included in readers for the first three grades. In the forty books examined

TABLE II

GEOGRAPHICAL MATERIALS APPEARING IN ALL THE READERS FOR EACH GRADE

Grade	Number of Pages of Geographical Material in Readers for the Grade	Percentage of Geographical Materials in Readers for the Grade
I	59.9	8.8
II	250.2	37.0
III	366.9	54.2
Total	677.0	100.0

only one map is found. This map is given in connection with a story of rubber, "Where the Raincoat Grows"; the map shows the route from New York to Para, Brazil.

TABLE III

DISTRIBUTION OF GEOGRAPHICAL SELECTIONS APPEARING IN TEN SERIES OF READERS ACCORDING TO TYPE OF MATERIAL

Type of Material	Number	Number of Pages	Percentage of Geographical Material
Prose	138	490.0	72.4
Poems	14	9.1	1.3
Pictures	379	177.4	26.2
Maps	1	0.5	0.1
Total	532	677.0	100.0

The topics chosen to indicate the content were grouped into ten topic headings. The following list indicates the materials included under each heading: (1) geographical terms, such as "sea," "desert," "ocean," "map"; (2) place geography: Holland, United States, London, and Far North; (3) persons, such as Lindbergh and Morse; (4) peoples, such as Indians, Eskimos, Japanese; (5) industries, such as farming, lumbering, cotton-raising; (6) transportation, such as

automobile, train, jinrickshaw, ship; (7) communication, such as telephone, telegraph, radio, mail; (8) food, such as milk, meats, fruits; (9) clothing, such as cotton, silk, wool; (10) shelter, such as wigwam, igloo, log cabin.

Table IV shows that nearly one-third of all the geographical materials found are stories about peoples. Second place is taken by industries, to which are given 29.1 per cent of the geographical materials. Transportation is third, with a percentage of 15.0. These

TABLE IV

AMOUNT OF MATERIAL DEVOTED TO EACH TOPIC IN GEOGRAPHICAL READING SELECTIONS IN TEN SERIES OF READERS

TOPIC	NUMBER OF SELECTIONS FOR GRADE			NUMBER OF PAGES DEVOTED TO TOPIC	PERCENTAGE OF GEOGRAPHICAL MATERIAL DEVOTED TO TOPIC
	I	II	III		
1. Geographical terms	0	5	1	30.7	6.2
2. Place geography	0	0	3	10.7	2.1
3. Persons	0	0	2	6.8	1.4
4. Peoples	0	20	15	158.6	31.8
5. Industries	13	8	35	145.3	29.1
6. Transportation	0	8	18	74.8	15.0
7. Communication	2	4	5	30.9	6.2
8. Food	0	3	3	22.7	4.5
9. Clothing	3	1	4	18.6	3.7
10. Shelter	0	0	0	0.0	0.0
Total	18	49	86	499.1	100.0

three topics comprise 75.9 per cent, or three-fourths, of the entire geographical content. Only 1.4 per cent of the geographical content is devoted to persons. Only two selections of this type are included in the books examined—both about Charles Lindbergh. Little space is given to place geography; only three selections, all about Holland, were found in this study. If the proportion of geographical materials devoted to each topic is any indication of its value, the most important geographical materials for the first three grades apparently are (1) peoples, (2) what they do, and (3) how they travel.

Major mention is made of nine peoples, Eskimos and Indians having the highest frequency; twenty-seven industries, farming ranking highest in frequency; fourteen modes of transportation, of

which train and aeroplane have the highest frequency. The space given Indians amounts to 40.7 pages—the largest amount of space given to any one item. To the farm are given 34.6 pages and to the Eskimo 33.7 pages. These three items receive treatment of the greatest extent. Only three items—"wool," "farm," and "postman" —are given major mention in each of the three grades. No one item is found in every reader. The item "farm" is found in the greatest number, twenty-three books. Indians are mentioned the greatest number of times, 362 in all. Items are given bare mention much more frequently than minor and major mention.

Few of the geographical selections are reprinted or derived from other sources. All but 31 of the 153 geographical selections are written by the authors of the various readers. The duplication of selections is almost negligible; two selections only, "Taxis" (a poem by Rachel Field) and "The Airplane" (a poem by Annette Wynne), are included in more than one book.

In eight of the ten series enrichment is named as the primary reason for including these geographical materials in readers.

SUMMARY

1. An analysis of forty readers for the first three grades indicates that the geographical materials given form a minor proportion of the total amount of material. However, the percentage of geographical material increases from grade to grade.

2. Only 8.8 per cent of all the geographical material is found in the readers for the first grade; second readers contain more than four times as much geographical material as primers and first readers; and third readers contain more than half of all the geographical materials found in readers for the first three grades.

3. The following types of geographical materials are found in the readers examined in this study: prose selections, poems, pictures or illustrations, and maps. Prose predominates with a percentage of 72.4. Pictures or illustrations, which rank second, are given 26.2 per cent of the space. These two types comprise 98.6 per cent of the entire amount of geographical materials.

4. The central themes given the largest proportion of the geographical material are peoples, industries, and transportation.

5. Practically no duplication of geographical materials is found in the readers studied. Only two selections are included more than once.

6. Geographical materials are included in readers for the first three grades primarily for the purposes of enriching and widening the child's experience.

7. During the progress of this study other related questions or problems were brought up, such as the following: (*a*) Should *any* geographical material be included in readers for the first grade? (*b*) Should an organized body of geographical subject matter be included in readers for the primary grades? (*c*) Should certain topics be treated in every grade, or should definite topics be designated for a particular grade? (*d*) Do certain topics, such as peoples, industries, and transportation, which are emphasized in readers for the first three grades, receive similar emphasis in the study of geography in the fourth grade?

THE TRANSITION FROM MANUSCRIPT TO CURSIVE WRITING

ESTHER WHITACRE ARNOLD
Germantown Friends School, Philadelphia, Pennsylvania

There are a variety of opinions concerning the proper time to make the transition from manuscript to cursive writing. Many experiments have been carried on, and conflicting results have been secured. This article tells how and when the transition is made in the Germantown Friends School.

In 1926 it was decided to begin the use of manuscript writing in the first grade. The other grades continued the cursive writing. The pupils in the first-grade group entering in 1926 and those following were taught nothing but manuscript writing until the autumn of 1930. By that time sufficient opportunity had been given to consider the value of manuscript writing. The teachers of the first and the second grades felt and still feel strongly that the simplified letters of the manuscript form and the apparent ease with which it is written have a marked effect in speeding up the learning of reading and spelling. The third-grade teachers felt that pupils in that grade should begin to use cursive writing. Therefore, the interesting experiment which will be described was initiated in the school year 1930–31.

This school has two sections to a grade. One third-grade section continued the use of manuscript writing until the middle of the year and then changed to cursive writing. The other third-grade section changed to cursive writing at the beginning of the year. At the beginning of the year the two fourth-grade and the two fifth-grade sections also changed to cursive writing. This procedure gave four distinct times of change. By the end of the school year the third-grade section which had been using simplified manuscript writing and some broad-pen manuscript writing during the first term and cursive writing during the second term had not gained normal expectancy. The procedure was unfair to them—entirely too much experimenting.

The third-grade section and the two fourth-grade sections changing to cursive writing at the beginning of the school year made the change with apparent ease.

Though the third-grade pupils made the change without difficulty, the teacher of penmanship felt that there was an element of unfairness in the experiment. These pupils had been perfecting the manuscript tool; then, as soon as this tool was acquired, they were asked to swing into cursive writing. The procedure had the effect of keeping these pupils in the position of plodders. The fourth-grade pupils swung over as easily as the third-grade pupils. Why not let the third-grade pupils continue the manuscript writing, enjoy their perfected automatic tool for writing unencumbered by the change? Consequently during the school year 1931–32 the two third-grade sections were allowed to continue with the simplified manuscript writing throughout the year, and they were happy in its use. Their stories were better composed and were more numerous. They improved the appearance of their pages. Their writing improved in quality, and time devoted to the proper holding of the writing tool made writing more automatic. Beginning the use of ink in this grade furnishes enough newness to hold the pupils' interest.

Again in 1931–32 the fourth-grade sections changed to cursive writing, and again we felt that this was the proper grade for the transition. During the first year of the experiment, 1930–31, there were but two outstandingly poor writers in the fourth grade as a result of the transition. In 1931–32 one child in the fourth grade was confused for a time, but he became a good writer.

Several of the fifth-grade children, who had used cursive writing for two years, have acquired a beautiful handwriting. Fifty per cent of these children have a rating of 75 per cent or higher on the standard scales of measurement, the Zaner Handwriting Scales and Standards for Grades Three and Four and Freeman's Handwriting Measuring Scale for Grade Four.

Samples of the writing of children making the change in the fourth grade are shown in Figure 1.

The leading steps in the transition from manuscript to cursive writing were as follows: Manuscript writing was used as a tool for the first three months. A review of manuscript writing was given in

the first few lessons. In the first transition lesson the simple undercurve joinings were used with such words as "cut," in which the letters are merely closed together in cursive writing. Then similar letters and words of like simplicity were practiced. Practice was next given in writing the pupil's name, the name of the school, and the name

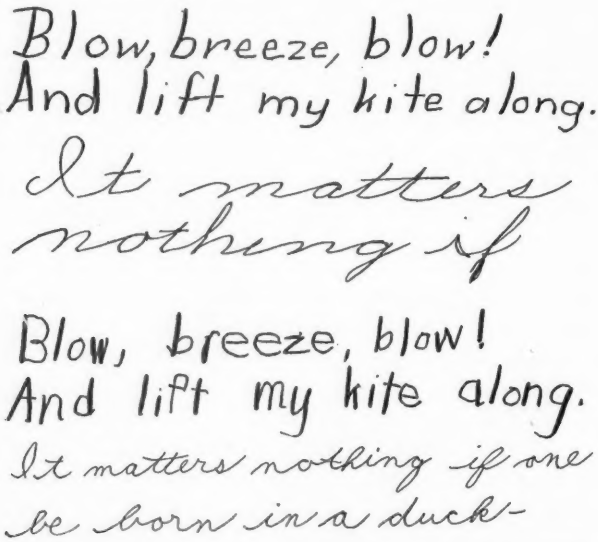

FIG. 1.—Samples of writing (reduced one-third) of two pupils who made the change from manuscript to cursive style at the beginning of the fourth grade in the autumn of 1930. The samples of manuscript writing were made in May, 1930, and the samples of cursive writing in June, 1931.

of the month. Letters which in cursive writing are vastly different from the manuscript forms, such as *r* and *s*, were next taken up. These were used in words. A slight forward slant was used without comment. Joinings of all types were stressed.

In December the pupils were encouraged to use what cursive writing they could command in the written spelling lessons. Manuscript forms were slipped in if the pupils could not recall the cursive forms promptly. The pupils were also encouraged to write stories and poems in cursive style. After the first of the year cursive writing was in-

sisted on in written spelling, the manuscript form still being used if the cursive forms seemed hard to recall or joining seemed difficult. It was required that a portion of every story be written in cursive writing. Classmates' names were written in cursive style. By March all the pupils were using cursive writing with keen delight and were obtaining a pretty page. Their eagerness for the cursive writing was the keynote to the great ease with which they attained ability in this form.

The teaching of manuscript writing in the primary grades is still further advantageous. The forms used closely resemble the basic

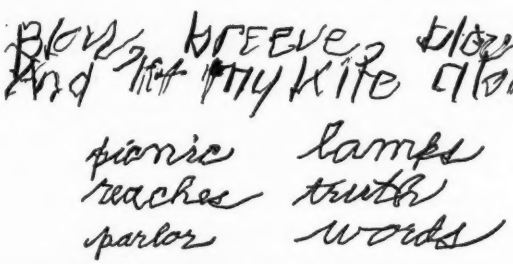

FIG. 2.—Samples of manuscript and of cursive writing (reduced one-half) written by boy with poor muscular control who was able to produce relatively good cursive writing although unable to write legibly in manuscript style. The manuscript writing was produced in May, 1930, and the cursive sample in March, 1931.

forms of the cursive writing. By continued use of these forms in the primary grades, unencumbered by joinings, the children gain clear pictures of forms. Thus, when the pupils swing into cursive writing, they retain clear-cut forms that develop into an accurate and a legible hand. The cursive writing used is a plain flowing style with slight forward slant.

Another finding should be given. One boy now finishing fifth grade greatly lacks muscular co-ordination. His writing in the manuscript style was not at all legible, and he was largely required to use the typewriter. The child has an exceptionally good mind, has dogged persistence, and allows himself no excuse for being different from his classmates. He persisted in taking all writing lessons as they were given. To the teacher's amazement his work in the cursive

writing began to take form and become legible. The teachers can now see the advantage of cursive writing for those afflicted with poor muscular control. In the manuscript writing the continual lift of the pen hindered the boy's development of the writing ability. In cursive writing, when he once had the unruly writing tool on the paper, he could guide it. The pencil was found to be a better tool than the pen for this boy. He feels happy in this accomplishment and less unlike his classmates. Samples of this boy's writing in the two forms are shown in Figure 2.

The chief drawbacks encountered in the manuscript style of writing are poor alignment and the tendency for the writing to become illegible when speed is desired. The tendency to poor alignment is caused by the continual lift and the lack of development of the "muscular feel," which comes early in the cursive writing. Through strenuous effort this tendency has been largely eliminated, the rhythmic work in the cursive writing overcoming the poor alignment found in the manuscript form. A few children wished to continue the use of manuscript writing and were allowed to do so. These few, now in sixth grade, are fighting for legibility, since the continual lift in manuscript writing retards speed and makes it slow for the adult hand.

In conclusion, then, because handwriting is necessary in school and in the social life of the average citizen, penmanship is taught throughout the primary and intermediate departments in the Germantown Friends School. Close correlation of the written work in all school subjects is the chief source of material. We find that manuscript writing meets the need of the young primary pupils but that it becomes illegible when the children grow older and wish to write rapidly. In the Germantown Friends School the change from manuscript to cursive writing is made in the fourth grade, as that has been found to be the most advantageous plan.

SELECTED REFERENCES ON KINDERGARTEN-PRIMARY EDUCATION[1]

KATHERINE L. McLAUGHLIN
University of California at Los Angeles

The references included in this bibliography on kindergarten-primary education were published between April 1 and December 31, 1932,[2] and present materials dealing with problems of the kindergarten and the first three grades. A few general references covering the field of elementary education are listed because they include extensive discussions devoted to the lower grades. Studies in special subject-matter fields have been excluded except when such studies have been specifically restricted to the kindergarten-primary level. This arbitrary selection eliminates pertinent data that may be found in bibliographies of special subject-matter fields. Limitation of space further restricted selection from the large number of available references. The titles chosen have been grouped under the following headings: (1) general educational aspects; (2) organization, techniques, and curriculum; and (3) investigations and experimental studies.

Annotations of studies for the period April to June were made for the United States Office of Education by Edna Dean Baker, president of the National College of Education, Evanston, Illinois, assisted by Louise Farwell, Martha D. Fink, Frances Kern, M. Frances McElroy, and Vera G. Sheldon. Annotations for the period from July 1 to December 31 were made by the present compiler.

[1] A prospectus of the complete cycle of twenty lists of selected references, with the names of the specialists preparing them, being published in this journal and the *School Review* may be found in the January number of the *Elementary School Journal*.

[2] There are also included two publications which appeared early in 1933 and one article appearing in March, 1932, which had not been previously listed.

GENERAL EDUCATIONAL ASPECTS[1]

117. DAVIS, MARY DABNEY, and KEESECKER, WARD W. *State Legislation Relating to Kindergartens in Effect 1931.* United States Office of Education Pamphlet No. 30 (1932). Pp. 30.
Summarizes the characteristics of legislation relating to kindergartens, tabulates the legal provisions for their establishment and maintenance, and gives the census figures concerning four- and five-year-old children and number attending kindergartens.

118. DEMEYER, JOHN E. "The Kindergarten," *American Childhood,* XVIII (December, 1932), 9.
Deplores the tendency to balance school budgets by discontinuing kindergartens and notes that the constructive influence of kindergartens is reflected in improved methods in all grades and in emphasis on school and home co-operation.

119. EVANS, J. M. *Social and Psychological Aspects of Primitive Education.* London, England: Golden Vista Press, 1932. Pp. 90.
Applies psychological principles to the interpretation of primitive education and evaluates latter in terms of character of adults. Stresses implications for modern child training.

120. HISSONG, CLYDE. *The Activity Movement.* Educational Psychology Monographs, No. 30. Baltimore: Warwick & York, Inc., 1932. Pp. x+122.
Presents historical perspective of the activity movement, evaluates contributions to current unitary concept of education, and points out certain limitations in otherwise "defensible foundation."

121. ISAACS, SUSAN. *The Children We Teach:* Seven to Eleven Years. London, England: University of London Press, 1932. Pp. 176.
Reports marked individual differences at any given age rather than fixed stages in mental development. Gives extensive consideration to children of ages seven to eleven and argues for methods that meet individual differences.

122. JOHNSON, ELEANOR (Compiler). "The New School: Its Philosophy, Teaching Technique, and Curriculum," *Childhood Education,* IX (January, 1933), 171–210.
A series of articles dealing with the following current problems: the needs of a changing society, the psychiatrist's interpretation of the new school, growth in subject matter, fundamental principles in education, differentiation of kindergarten curriculums, social studies in the lower school, and the "whys and hows" of the activity program.

123. LANE, ROBERT HILL. *A Teacher's Guide Book to the Activity Program.* New York: Macmillan Co., 1932. Pp. viii+258.
Analyzes the educational philosophy of the "life-centered" school, presents expository accounts of units of work developed through classroom activities, and evaluates procedures in terms of educational philosophy.

[1] See also Item 110 in the list of selected references appearing in the March number of the *Elementary School Journal.*

124. PIAGET, JEAN, and Others. *The Moral Judgment of the Child.* Translated by Marjorie Gabain. London, England: Kegan Paul, Trench, Trubner & Co., Ltd., 1932. Pp. x+418.

Studies moral ideas regarding right and wrong as found in rules of juvenile games, in acceptance of adult authority, and in evidences of co-operation and justice.

125. *The School Health Program.* Report of the Committee on the School Child, Thomas D. Wood, Chairman. Section III, Education and Training, White House Conference on Child Health and Protection. New York: Century Co., 1932. Pp. xx+400.

Deals with composite provisions for safeguarding the health of the school child. One of thirteen publications prepared by Section III of the White House Conference.

126. "Status of the States," *School Life*, XVIII (October, 1932), 27.

Reports that data concerning kindergarten enrolment supplied by the states to the United States Office of Education indicate (1) that practically all public-school kindergartens are located in cities, (2) that approximately one-third of the four- and five-year-old children in cities with populations of twenty-five hundred or more are enrolled in kindergartens, and (3) that Nebraska leads with 80 per cent of city children in kindergartens, while South Carolina ranks last with 0.4 per cent.

ORGANIZATION, TECHNIQUES, AND CURRICULUM[1]

127. BILDERSEE, DOROTHY. *Teaching the Primary Grades.* New York: D. Appleton & Co., 1932. Pp. xx+332.

Outlines psychological principles and presents practices developed in experimental schools at the kindergarten-primary level.

128. CAREY, ALICE E., HANNA, PAUL R., and MERIAM, J. L. *Catalog: Units of Work, Activities, Projects, etc., to 1932.* Lincoln School Research Studies. New York: Lincoln School of Teachers College, Columbia University, 1932. Pp. xii+290.

Lists, groups, and annotates seven thousand printed accounts of units of work, activities, bulletins, courses of study, books, pamphlets, etc. Tells where and how these may be obtained. The data presented are evidence of the strength of the movement to organize curriculums around units of child experiences.

129. CLOUSER, LUCY WELLER, ROBINSON, WILMA J., and NEELY, DENA LOIS. *Educative Experiences through Activity Units.* Chicago: Lyons & Carnahan, 1932. Pp. 352.

A record of activities carried on with primary classes. The contents are grouped into three parts: the theory underlying curriculum activities, suggestions for organization, and activities centered on the social studies.

[1] See also Items 38 and 39 in the list of selected references appearing in the February number of the *Elementary School Journal.*

130. DALGLIESH, ALICE. *First Experiences with Literature.* New York: Charles Scribner's Sons, 1932. Pp. xviii+162.

Deals with literature and methods appropriate in nursery, kindergarten, and primary classes. Includes an introduction by Patty S. Hill.

131. DEVEREAUX, SISTER MARY CECIL. "Children's Literature: Annotated Bibliography of Books and Periodical Articles about Children's Literature and Reading," *Children's Library Yearbook,* No. 4, pp. 125–68. Compiled by the Committee on Library Work with Children of the American Library Association. Chicago: American Library Association, 1932.

Deals with selection and guidance of reading of young children.

132. DOLCH, EDWARD WILLIAM. "Exercises in Readers," *Elementary School Journal,* XXXIII (September, 1932), 59–66.

Classifies exercises found in primary-grade readers and analyzes functions of one type of exercises.

133. HARDY, MARJORIE (Editor). *Reading Emphasis in School Activities.* Bulletin of the Association for Childhood Education. Washington: Association for Childhood Education, 1933. Pp. 46.

Summarizes discussions of the topic at the Cleveland meeting (1931) and gives papers and discussions at the Washington meeting (1932) of the association.

134. MCCALL, WILLIAM A. (Editor). *Teachers' Lesson Unit Series.* New York: Teachers College, Columbia University, 1932. Nos. 1–60.

A series of pamphlets describing units carried out in schools throughout the country in all phases of work in all grades. Each lesson unit discusses how the particular unit originated, the chronological development of the unit, children's bibliography, teacher's bibliography, and how the activity culminated. The following lesson units are pertinent to kindergarten-primary grades: Nos. 6, 9, 13, 15, 17, 20, 29, 33, 36, 37, 43, 44, 47–50, 53, 56, 57, 59, and 60.

135. MATHIAS, MARGARET E. *The Teaching of Art.* New York: Charles Scribner's Sons, 1932. Pp. xii+356.

Presents basic truths on which art rests and shows that success in teaching is dependent both on mastery of techniques and subject matter and on understanding of children. Condemns copy-work, patterns, and emphasis on skills rather than on ideas. Compact content rich in pictorial and verbal ideas.

136. MORTON, R. L. "Developing Number Ideas," *Grade Teacher,* XLIX (June, 1932), 770, 813.

Emphasizes the importance of meaningful experiences with concrete number prior to the introduction of symbols.

137. REED, MARY M., and WRIGHT, LULA E. *The Beginnings of the Social Sciences.* New York: Charles Scribner's Sons, 1932. Pp. xxxiv+224.

Presents curriculums for kindergarten and first grade organized around children's experiences in a "changing social world." Applies the results of scientific

studies to interpretation of the child's needs, and, in so doing, attempts to lay the foundation for the social ideals included in the "art of living together." The introduction by Patty S. Hill reviews the history, philosophy, and practice of the kindergarten and shows its relation to primary grades.

138. SANGREN, PAUL V., and WILSON, MARY C. Instructional Tests in Reading. Bloomington, Illinois: Public School Publishing Co., 1932.

Reading tests designed for Grades I–IV. Include word and phrase recognition, understanding sentences, following directions, and association of rhymes or sentences with illustrations. Prepared in Forms A and B.

139. TEEGARDEN, LORENE. "Kindergarten and Reading Reversals," *Childhood Education*, IX (November, 1932), 82–83.

Describes "reversal tests" administered to school entrants who show a tendency to reverse letters or words. Suggests corrective measures. The tests include reproduction from memory of letters and figures, discrimination of differences and similarities of letters and figures, and copying unfamiliar forms.

140. TEMPLE, ALICE (Editor). *A Better Beginning in Reading for Young Children—and Modern Trends in Teacher Preparation and Teacher Guidance:* Proceedings of Two of the Conferences Held during the Cleveland Meeting. Washington: Association for Childhood Education, 1932. Pp. vi+40.

Summarizes the discussions at the Cleveland meeting (1931) of the association. Contributors include Marjorie Hardy, William S. Gray, Laura Zirbes, May Hill, Florence Bamberger, Macie Southall, and Mary A. Jacobs.

141. WRIGHT, LULA E. *A First Grade at Work: A Non-Reading Curriculum* (Units of Work). Lincoln School Curriculum Studies. New York: Lincoln School of Teachers College, Columbia University, 1932. Pp. xii+248.

Describes a curriculum extending the "reading-readiness period" until the fund of experiences and the maturation of the eyes yield a "more economical basis" for beginning reading. Content based on class notes of day-by-day development of activities.

INVESTIGATIONS AND EXPERIMENTAL STUDIES[1]

142. BACON, CLARISSA R. "A Study of Kindergarten Trait Ratings," *Childhood Education*, IX (December, 1932), 133–38.

Describes the formulation and the use of a rating sheet containing thirty-five traits. Children in eight kindergartens were rated for four consecutive quarters. The reliability of the trait ratings were established by correlation methods. The results indicate appreciable and measurable improvement in the traits rated.

[1] See also Item 77 in the list of selected references appearing in the March number of the *Elementary School Journal*.

143. BELCHER, ESTHER L. "A Technique for Diary Analysis," *Child Development*, III (March, 1932), 53–56.

Reports a study of observation records of fifty-nine kindergarten children to determine the reliability of diary data in defining coarse units of behavior trends within groups.

144. MELLINGER, BONNIE E. *Children's Interests in Pictures*. Teachers College Contributions to Education, No. 516. New York: Teachers College, Columbia University, 1932. Pp. x+52.

An investigation of two phases of children's interests in pictures: (1) interest in color as compared with black and white and (2) interest in realistic as compared with conventional style. The author tested 795 children of first, third, and fifth grades. The results indicate preference at all age levels for color, preference for three rather than two colors, and decided preference for realistic rather than conventionalized pictures.

145. STAATS, PAULINE. "A Vocabulary Study of First Grade Poetry," *Childhood Education*, IX (December, 1932), 127–28.

The author checked the vocabulary of eighty-seven poems recommended for first-grade reading with standard vocabulary lists and with vocabulary of prose material.

146. ZYVE, CLAIRE. "An Experimental Study of the Teaching of Arithmetic Combinations," *Educational Method*, XII (October, 1932), 16–18.

Gives results of a controlled experiment with seventy-six second- and third-grade children, comparing the effects of blackboard and lantern-slide presentations of arithmetic combinations.

Educational Writings

REVIEWS AND BOOK NOTES

The history of history-teaching.—The second volume of the Report of the Commission on the Social Studies[1] deals with a field the significance of which for teachers of social studies is equaled only by the prevailing lack of knowledge concerning it—the history of the teaching of the social sciences. The volume is brief and affords only an introduction to the field, but as "an exploratory survey of the lessons which past experience has to offer on the questions uppermost in educational discussion today" (pp. v–vi) and as a promise of a more extended discussion of the same field later by Professor Johnson, the volume is a distinct contribution.

Thirteen short chapters compose the volume. The first three deal with the rise of history before it became a "subject" in the school curriculum. Chapters iv to x summarize the work of outstanding teachers of history and theorists dealing with the function of history in education in the period 1575 to about 1850. The chapters in this group are: "History Enters the School Curriculum," "*Der Kluge Hoff-Meister*," "History for Emile," "Joseph Priestley as a Teacher of History," "The Treatment of History by Basedow and His Associates," "Frederick the Great as an Advocate of School Instruction in History," and "Karl Müller's Survey of History Teaching." Chapter xi is "History in the Integration of School Studies"; chapter xii is "Fitting the Past to the Present"; and chapter xiii is "Using the Past To Explain the Present." The first ten chapters of the book are chronological; the last three are topical. Much of the book is biographical in its general approach.

The scholarly basis for Professor Johnson's book is evident on every page. His résumé of important writings and events in the teaching of history includes material on the objectives, the curriculum, teaching equipment, and methods of procedure. His descriptions and analyses are truly mirrors "in which we see some of the most fundamental of our own discoveries" (p. 47), and they are well calculated to puncture many of our current conceits as well as to afford perspective for understanding the present. The volume will be stimulating and thought provoking to teachers and students generally. It seems to the reviewer,

[1] Henry Johnson, *An Introduction to the History of the Social Sciences in Schools.* Report of the Commission on the Social Studies of the American Historical Association, Part II. New York: Charles Scribner's Sons, 1932. Pp. vi+146. $1.25.

however, that the book has two limitations, which the reader should keep in mind—limitations imposed, no doubt, by the brevity of the book, its position as one of a series of correlated volumes, and by the conditions under which it was written. First, the title of the book is broader than the book itself; it is much more a history of the teaching of history than a history of the teaching of the social sciences. While it is true that for centuries history was virtually the only social science (and with these centuries Professor Johnson deals admirably), it is unfortunate that his volume almost ignores economics, sociology, and social psychology and gives only meager space to geography and government. Second, the book is more negative than positive in its tone. On occasion it seems to have been written more to demonstrate that there is nothing new in education than to assay the developments of the past in a constructive manner. Withal, the book's values overshadow its defects, and the volume should be familiar to all who deal with teaching in the social-science field.

HOWARD E. WILSON

HARVARD UNIVERSITY

Modern methods in the elementary-school subjects.—The book here under review[1] is a textbook in elementary-school methods with a misleading title, a pertinent introductory chapter, an excellent treatment of general teaching techniques, and a practical presentation of the special methods which pertain to the more important elementary-school subjects.

Just why the authors chose the phrase "directing learning" as the title keynote is difficult to explain, for the book places its chief emphasis on pupil self-activity and indirect learning. Any faults in the title, however, are more than made up in the introductory chapter, which is exceptionally "pertinent" because, as Webster says, it "relates to the subject or matter in hand" in a delightfully clear-cut and stimulative manner. The reader is at once convinced that the authors have their subject matter thoroughly in hand, and he is given, together with an early orientation, the appropriate mind-set referred to in later chapters.

The remaining chapters in Part I are devoted to the more general aspects of teaching and learning. The section includes a chapter each on the nature of learning, the various learning activities, the acquisition of knowledge, the patterns of conduct, and the needs of individual pupils. The authors assert that they desire to be progressive but not radical, steering between the conservatism of the more conventional school and the undirected "freedom" of the extreme progresssive school. The reviewer would say that they have decidedly progressive leanings but that these are tempered throughout the book by the constant attention paid to related scientific studies. Part I affords the reader a brief but thoroughly up-to-date and sound treatment of general methods.

Part II is devoted to the special methods of teaching connected with reading,

[1] Walter S. Monroe and Ruth Streitz, *Directing Learning in the Elementary School.* Garden City, New York: Doubleday, Doran & Co., Inc., 1932. Pp. x+480. $2.50.

language, the social studies, arithmetic, handwriting, and the fine and the industrial arts. Here the authors, in the interests of unity, make something of an attempt to cast their special methods in the common mold of the preceding general methods. This procedure is of doubtful validity; certainly, it is unnecessary in light of the excellent array of carefully chosen special methods and devices which make up these chapters. The reviewer is particularly impressed with the helpful way in which the writers have combined scientific and progressive practices in their treatment of reading and arithmetic. In all the chapters the reader easily senses the familiarity of the writers with the pedagogical and experimental literature which bears on the subject under treatment. If any criticism were to be made of these later chapters, it would be to note the absence of reference to certain practical although less scientific teaching procedures which are in fairly widespread use.

Taken as a whole, the book may be recommended highly as a sound, up-to-date, stimulative treatment of modern methods in the elementary-school subjects. The reviewer commends it both for use as a general textbook and for individual reading.

FRED C. AYER

UNIVERSITY OF TEXAS

An experimental evaluation of the efficiency of the junior high school.—The junior high school as a distinctive type of school is today about twenty-five years old. According to the latest statistics from the United States Office of Education, there are at present something like sixteen hundred such schools in the United States and approximately three thousand other systems which have adopted most of the essential features of the junior high school. Yet there are those who characterize this new type of organization as a failure and prophesy its early abandonment. Among the many reasons that led to the development of the junior high school, two stand out prominently: (1) the desire to economize time by giving briefer program allotments to the so-called "fundamental subjects" in Grades VII and VIII and (2) the desire to prepare pupils better for senior high school and college by beginning the study of secondary-school subjects earlier than was formerly done. Critics have contended that the new type of school is not realizing either of these objectives, at least in any satisfactory manner.

A number of studies have been made relating to the questions at issue. For the most part, however, these have dealt with attainments of pupils after leaving the junior high school and have been confined to analyses of data gathered from single school systems. In a recent study[1] a different approach is made. Here the problem is restricted to the work done in the junior high school grades, and the study includes data from six different school systems. The author seized on the

[1] Bancroft Beatley, *Achievement in the Junior High School.* Harvard Studies in Education, Vol. XVIII. Cambridge, Massachusetts: Harvard University Press, 1932. Pp. xiv+92. $2.00.

fact that the time allotments given to the so-called "fundamental subjects" in Grades VII, VIII, and IX are usually much shorter in typical junior high schools than the time allotments given the same subjects in typical un-reorganized school systems, and he sought to determine the relative gains in achievement made by pupils under these conditions within the two systems.

To carry on his investigation, Beatley selected six representative school systems in Massachusetts. Three of these systems were organized on the old 8–4 basis, while three were organized on the 6–3–3 basis. From these six selections three pairs of school systems were made, care being taken to insure an approximate equality with respect to size, community interests, and economic resources in each pair. Moreover, selection of the three junior high school systems was originally made so that a difference in time allotments would appear between these schools and the 8–4 systems with which they were compared.

By the use of the Stanford Achievement Test and the Otis Self-administering Tests of Mental Ability as the measuring instruments, the seventh-grade pupils in the six school systems selected were tested in the autumn of 1927 and again retested as ninth-grade pupils in the spring of 1930. Not only were the school systems paired on a basis of comparable data, but the groups of pupils in each 6–3–3 system were paired with similar groups in the paired 8–4 system with respect to sex, chronological age, educational age, and intelligence quotient at the seventh-grade level.

The summarized findings of the investigations are as follows:

1. In none of the functions measured does the difference in gain favor consistently either the non-junior school or the junior high school.
2. In each of the functions measured at least one of the six paired groups shows a substantial difference in gain.
3. In the detailed aspects of achievement, twenty-four of the sixty-six differences in gain are substantial.
4. Of the twenty-four substantial differences, twelve favor the non-junior school, and twelve the junior high school.
5. Of the twenty-four substantial differences, eleven are found in paired groups of boys, thirteen in paired groups of girls.
6. In eighteen of the twenty-four substantial differences, superiority in gain is associated with inferiority in initial ability.
7. In total achievement, two out of six paired groups show substantial differences in gain—one in favor of the non-junior school, the other in favor of the junior high school [p. 79].

Clearly, in so far as the specific question here in dispute is concerned, Beatley's study has made out a case for neither the junior high school nor for the older form of school organization. As he himself states, "Neither type of school has demonstrated its superiority over the other in furthering gains in achievement in fundamentals" (p. 79). This conclusion will, of course, be disappointing both to the extreme antagonists and the extreme protagonists of the school-reform program. Nevertheless, the data collected warrant no other deduction.

However, considered indirectly, Beatley's study plays completely into the hands of the advocates of junior high schools. For certainly, if equally satisfactory results can be obtained in "fundamentals" in Grades VII, VIII, and IX by giving much less time to the teaching of these subjects than is given in other systems, then much greater time is made available in those grades for work on things other than "fundamentals." Moreover, to proceed in this manner is true economy. Indeed, this economy in time is precisely the main thing for which Eliot and the Committee of Ten pleaded forty years ago, when the impetus producing the junior high school was started. To eliminate waste and still maintain efficiency—these are the aims of every school administrator. By devoting less time to fundamentals, the junior high school has more time in which to extend the scope of general education and to offer to young people a truly vitalizing program of studies. This fact is the glory of the junior high school. By reason of it, as Beatley says, "It has enriched the program of studies through the introduction of presumably more vital content of a social and scientific nature; it has broadened the scope of its instruction in mathematics; it has made an earlier beginning on foreign-language study; it has enlarged the opportunities for participation in art and music, in the manual, domestic, and commercial arts, and in physical activities" (pp. 82–83).

Possibly critics may find weaknesses in some of the assumptions and procedures adopted by the author in his study. Indeed, the investigator himself anticipates these. For example, he frankly acknowledges that, in making his comparisons, he ignored such factors as differences in the professional competence of teachers, differences in standards of promotion, differences in the quality of professional leadership, differences in salary schedules, differences in pupil-teacher ratios, and other differences of similar types. Rather he assumed that such elements "probably would not operate consistently to favor one type of school organization rather than the other" (p. 19). With this assumption the reviewer agrees. Uncontrollable factors of many kinds are inherent in most problems that concern practical school situations. This fact, however, in no wise detracts from the validity and the value of such studies, nor does it detract from the present investigation. The author has done a highly creditable piece of work and has done it under difficulties. To the reviewer, his data are representative and adequate, his procedures defensible and appropriate, and his conclusions valid and expressive. The study is a real contribution to the science of education and especially to the literature relating to the junior high school. In particular, the book will furnish much sound factual material to those who are defending the newer type of school organization against the attacks of those who seek to undermine its development on the score that it is needlessly expensive and inefficient.

All educators, whether friends or foes of the school-reorganization movement, will wish to read this book.

C. O. Davis

University of Michigan

An evaluation of teacher-tenure legislation.—The movement to secure protected tenure for the public-school teacher has resulted in legislation of a type that should be frankly recognized as experimental. Such legislation has been supported by the leaders in the organized educational associations with a view to protecting the teacher from petty political and social attacks. It was thought that, by eliminating the annual-election plan and insuring tenure during efficiency and good behavior, the teaching staff would be stabilized, a higher type of talent would be attracted to the profession, and the efficiency of the schools would be increased. Strong opposition to such legislation has been made by superintendents and boards of education because of the difficulties encountered in dismissing undesirable teachers on tenure. Many school officials are reluctant to place teachers on tenure. They contend that such teachers become more difficult to supervise, less progressive, and less co-operative. The unwillingness to place teachers on tenure is said to result in the dismissal of many satisfactory teachers at the end of the probationary period, in increases in teacher turnover, and in a decrease in the efficiency of the schools.

Since the first state-wide law providing tenure of service for public-school teachers was enacted by the legislature of New Jersey in 1909, thirteen other states and the District of Columbia have enacted similar legislation. Cities have favored such legislation to an even greater extent. In 1924 there were forty-two cities in twenty-two states with tenure regulations. Although the legislation in most of the states is too recent for a just appraisal, that of New Jersey should be amenable to thorough evaluation. Such an evaluation has recently been reported by Holmstedt.[1]

In order to determine the effects of the New Jersey tenure law on teacher dismissal, transiency, turnover, professional improvement in service, and policies of personnel administration, the author collected data by the questionnaire method from 42 per cent of all the school systems in New Jersey and from 64 per cent of the systems in Connecticut having teaching staffs of from 10 to 350 teachers. Since Connecticut does not have a tenure law, comparisons between systems in the two states reveal, at least to some extent, the effects of tenure legislation.

The New Jersey tenure law provides that teachers cannot be discharged after serving the probationary period of three years "except for inefficiency, incapacity, conduct unbecoming a teacher, or other just cause." The charges must be written, and the teacher must be given a hearing before the board of education with privilege of counsel. If dismissal follows the hearing, the teacher may appeal to the commissioner of education of the state.

It was found that the rate of dismissal in the case of elementary-school teachers, principals, and supervisors is slightly higher in Connecticut; in the case of high-school teachers and special teachers, it is higher in New Jersey. None of the

[1] Raleigh W. Holmstedt, *A Study of the Effects of the Teacher Tenure Law in New Jersey*. Teachers College Contributions to Education, No. 526. New York: Teachers College, Columbia University, 1932. Pp. x+112. $1.50.

differences is statistically significant. Approximately 60 per cent of all dismissals in New Jersey occur during the first year of service as compared with 44 per cent in Connecticut. Between the first and fifth year of service differences are not statistically significant, but after the fifth year dismissals in Connecticut are 14.9 per cent higher. Superintendents in New Jersey reported that 63 teachers of a total of 1,007 would be dismissed if they were not employed on tenure. During the twenty years between the enactment of the tenure legislation and the time of the study, forty-two cases of dismissal had been appealed to the commissioner of education. Twenty of these were decided in favor of the teacher.

Total teacher turnover in New Jersey is 9.6 per cent, in Connecticut 13.5 per cent, the difference being eight times its probable error. When dismissals are subtracted from total turnover, it is found that 6.6 per cent of New Jersey teachers and 10.8 per cent of Connecticut teachers voluntarily terminated their service. Comparable data concerning teacher turnover in New Jersey show an increase of 2.3 per cent between 1912 and 1925.

The effects of tenure on the professional improvement of teachers in service were determined by comparisons of the two groups on the bases of summer-school credits earned, professional books and periodicals read, and membership in professional organizations. The data revealed that tenure had no effects on the progressive tendencies of teachers. However, the investigator failed to point out in connection with this conclusion that in New Jersey 85 per cent of the teachers not on tenure returned the questionnaire and only 68 per cent of those on tenure returned it. This fact points strongly to the conclusions that those teachers on tenure who answered the questionnaire were a highly selected group and that any conclusions based on the data, as well as the statistical techniques used in interpreting the data, are invalid. It also indicates that there is a real difference in the progressiveness of the two groups.

The facts gathered in this study will be a source of no great satisfaction either to those who favor or to those who oppose tenure legislation. They point to the conclusions that the dismissal of unsatisfactory teachers should be less difficult and that the professional improvement of teachers on tenure must be stimulated through the salary schedule.

Considering the limitations of the questionnaire method, the study is worthy of commendation. It is difficult to understand why a state department of education operating under tenure legislation would not be sufficiently interested in the evaluation of the law to insure an investigator returns of 100 per cent on the facts which are pertinent.

WALTER W. COOK

EASTERN ILLINOIS STATE TEACHERS COLLEGE
CHARLESTON, ILLINOIS

Progress in measurement by direct observation.—The past six years have witnessed a rapidly growing group of investigations employing methods of measurement by direct observation, which have been variously characterized as

"time-sampling," "repeated short samples," "natural-history approach," "situational analysis," etc. The reviewer's bibliography of studies employing some variation of time-sampling techniques now numbers fifty titles, and a report by Arrington[1] represents a worthy addition. The monograph is one of a series in experimental sociology conducted at the Child Development Institute of Teachers College, Columbia University. For a complete background to the investigation the reader should refer to preceding reports by Dorothy Swaine Thomas and students working under her direction.

Part I of the present study is devoted to a critical examination of techniques for studying the social, material, and self components of undirected activity. Part II presents individual and normative data, consistency of evidence with data collected by other research workers on the same children, the interrelations of variables, and a preliminary attempt at prognosis.

The subjects of the investigation were twenty children, ranging in age from sixteen to thirty-two months at the beginning of the observation period. Since the primary emphasis of the study was on the development of method, the number of cases was felt to be sufficient, and the author makes clear the tentative nature of the normative summaries.

A considerable period of exploratory work preceded the development of a practicable technique. In the final approach to the problem the investigator studied the following categories of behavior in children: (1) contact with material, (2) walking or other physical activity not accompanied by contact with material, (3) absence of overt activity, (4) talking, (5) physical contact with persons, (6) laughing, and (7) crying. The behavior to be included in these classifications was described in some detail, and a code was used in recording. Two experienced observers made simultaneous observations for five-minute intervals. Twenty-four five-minute records were made as a minimum. The method of recording permitted further fractionation of the time unit.

Analyses were made in terms of both duration and frequency of occurrence of the behavior appearing in the records. The reliability data are reported in too great detail to warrant specific mention here. Suffice it to say that the coefficients of correlation reported for reliability are usually in the neighborhood of .90. Two of the more stable interrelations are between age and "talking to persons" ($.73 \pm .05$) and between age and social contacts initiated ($.66 \pm .06$). The correlation of $.54 \pm .08$ between total physical activity and vocalization may be indicative of the concomitance of two types of extrovert activities.

Talking to persons ($.62 \pm .11$) and talking to self ($.46 \pm .14$) appear to give the most enduring picture of the behavior patterns of children within the various categories of behavior studied over an interval of a year. An increase in the amount of verbalization and a relative shift from non-social to social talking in the age period from two to three years were also marked features of the data.

[1] Ruth E. Arrington, *Interrelations in the Behavior of Young Children.* Child Development Monographs, No. 8. New York: Teachers College, Columbia University, 1932. Pp. xviii+156.

The writer of the monograph states: "No attempt has been made to relate the findings to intelligence, as measured by mental age or intelligence quotient, since psychological tests, as thus far developed, are recognized to be unsatisfactory measures of the mental ability of very young children" (p. 83). To the reviewer, even if the relatively unsatisfactory character of the instruments be granted, this position appears to be untenable in advance of use in view of the considerable number of stable trends reported in existing studies.

The student of time-sampling as a method of research will be interested in one generalization arrived at during the evolution of procedure: "In this discussion of the evolution of a method, emphasis has been repeatedly placed upon two fundamental trends in the process, the tendency to divide the total behavior complex into finer and finer units and the tendency to eliminate every element capable of different interpretation that might reduce the reliability of the data recorded" (p. 27).

The report is written primarily with the needs of the research specialist in mind. Investigators of the behavior of young children will find the report rich in suggestions for further study.

WILLARD C. OLSON

UNIVERSITY OF MICHIGAN

The teaching of poetry.—Hooper's book[1] presenting the teaching of poetry in the elementary school is small in size but large in content. The book treats in turn three major themes: teaching objectives and procedures, the integration of poetry with other school subjects, and suggestions for guiding pupils in creative work.

The first three chapters discuss the place of poetry in the new curriculum and set forth the present-day objectives as twofold: "the appreciative [growth] and the creative growth of the child" (p. 42). Chapter iv assigns to the primary grades the teaching of "rhythm, meaning, and pictures" (p. 41) and to the middle grades instruction in "sound, sense, and suggestion" (p. 65). At the close of this part of his volume the author quotes Alexander Haddow (*On the Teaching of Poetry*): " '. . . . teaching poetry is like life . . . . we lay down a few principles that ought to be followed, but . . . . the method of applying these principles varies with the class, the poem, and the teacher' " (p. 82).

The second theme is developed in chapter v by means of many concrete suggestions for associating poetry with the social studies, particularly with world-exploration, with the development of America, and with our European backgrounds. If the author had allocated such synthesis to the upper grades of the elementary-school curriculum, his program would have had better balance. To grasp the significance of poetry as interpreting life in the larger sense is probably too difficult for pupils of the primary grades.

The third theme, creating poetry, presented in chapter v, denies any purpose

[1] John Hooper, *Poetry in the New Curriculum:* A Manual for Elementary Teachers. Brattleboro, Vermont: Steven Daye Press, 1932. Pp. 136.

of creating poets but maintains that in attempts at creative writing the children learn how to discriminate among words, acquire a sense of arrangement of ideas, and attain "a realization that language is as alive as the moment in which it is used" (p. 113).

R. L. LYMAN

Evaluating pupil progress.—The content of a recent monograph[1] may be inferred from the title *Rating School Pupils*. The first three chapters deal, respectively, with the classification of criticisms most frequently directed against conventional pupil reports, means of increasing the range of teacher judgments of pupils' work, and methods of making ratings more objective. The fourth chapter, entitled "Finding a Standard for Rating," is devoted to the development of a scale for grouping and comparing scores of classroom tests and for reducing them to composite scores. The scale is "analogous to the T-scale in use with standard tests" (p. 30) and is a "standard scale derived from the standard deviation from the mean of a normal distribution" (p. 49). The use of a device by which a series of raw scores can be automatically scaled is also explained. How the measurement of pupil effort may be facilitated by the use of the scale under discussion forms the main material of the final chapter.

No reference is made to departures from conventional schemes for marking pupils, such as recording only the passing or the failing of a mastery test on the essentials of a given unit or indicating satisfactory or unsatisfactory performance in citizenship traits without reference to standing in classroom subjects. The book is written in concise and non-technical style, and its content should prove stimulating to instructors in educational measurement, to principals, and to classroom teachers.

PAUL R. PIERCE

WILLIAM E. GLADSTONE SCHOOL
CHICAGO, ILLINOIS

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

ABELSON, HAROLD H. *The Art of Educational Research:* Its Problems and Procedures. Yonkers-on-Hudson, New York: World Book Co., 1933. Pp. xii+332. $2.00.

BOWDEN, HAYGOOD S. *Two Hundred Years of Education:* Bicentennial 1733–1933, Savannah, Chatham County, Georgia. Richmond, Virginia: Press of the Dietz Printing Co., Publishers, 1932. Pp. xvi+382.

BREED, FREDERICK S. *Classroom Organization and Management.* Yonkers-on-Hudson, New York: World Book Co., 1933. Pp. xvi+472. $2.00.

[1] Charles Russell, *Rating School Pupils.* New York: Teachers College, Columbia University, 1932. Pp. 74.

Chesterfield Education: The Record of Four Years of Experiment and Reconstruction. Prepared by Members of the Staff of the Education Office. Chesterfield, Derbyshire, England: Chesterfield Education Committee (Foljambe Road), 1932. Pp. 312.

CRUTSINGER, GEORGE M. *Survey Study of Teacher Training in Texas, and a Suggested Program.* Teachers College Contributions to Education, No. 537. New York: Teachers College, Columbia University, 1933. Pp. viii+226.

Developing Attitudes in Children. Proceedings of the Mid-West Conference of the Chicago Association for Child Study and Parent Education, March, 1932. Chicago: University of Chicago Press, 1933. Pp. viii+156. $1.50.

DE YOUNG, Chris A. *Budgetary Practices in Public School Administration.* Northwestern University Contributions to Education, School of Education Series, No. 8. Evanston, Illinois: School of Education, Northwestern University, 1932. Pp. viii+152.

DUROST, WALTER NELSON. *Children's Collecting Activity Related to Social Factors.* Teachers College Contributions to Education, No. 535. New York: Teachers College, Columbia University, 1932. Pp. viii+116. $1.50.

The Educational Frontier. Written in Collaboration by William H. Kilpatrick (editor) and Others. New York: Century Co., 1933. Pp. vi+326. $2.50.

Effective Instructional Leadership: A Study of the Problem of Integration. Sixth Yearbook of the Department of Supervisors and Directors of Instruction of the National Education Association. New York: Teachers College, Columbia University, 1933. Pp. x+184.

FRAWLEY, HONORA MARGARET. *Certain Procedures of Studying Poetry in the Fifth Grade.* Teachers College Contributions to Education, No. 539. New York: Teachers College, Columbia University, 1932. Pp. iv+90. $1.50.

FREDERICK, ORIE I. *Two Standardized Check Lists for the Organization of Secondary Schools:* One for Junior High School Grades and One for Senior High School Grades. Ann Arbor, Michigan: Orie I. Frederick, 1933. Pp. 64.

Growth and Development of the Child: Part II, Anatomy and Physiology. Report of the Committee on Growth and Development, Kenneth D. Blackfan, Chairman. Section I, Medical Service, White House Conference on Child Health and Protection. New York: Century Co., 1933. Pp. xxii+630. $4.00.

HUME, SAMUEL J., and FOSTER, LOIS M. *Theater and School.* New York: Samuel French, 1932. Pp. viii+418. $3.50.

JUDD, CHARLES H. *Problems of Education in the United States.* Recent Social Trends Monographs. New York: McGraw-Hill Book Co., Inc., 1933. Pp. xii+214. $2.50.

LACEY, JOY MUCHMORE. *Social Studies Concepts of Children in the First Three Grades.* Teachers College Contributions to Education, No. 548. New York: Teachers College, Columbia University, 1932. Pp. vi+90. $1.50.

LAWLER, EUGENE STALLCUP. *A Technique for Computing the Amount of New Aid Required for State Equalization Programs.* Teachers College Contribu-

tions to Education, No. 547. New York: Teachers College, Columbia University, 1932. Pp. viii+46. $1.50.

McLEES, MARY HUNTER. *A Study of the Elementary Teaching Personnel of Hunterdon, Morris, Sussex, and Warren Counties, New Jersey, with Particular Reference to the State Program of Teacher Training.* Teachers College Contributions to Education, No. 512. New York: Teachers College, Columbia University, 1932. Pp. x+96. $1.50.

MONROE, PAUL. *Essays in Comparative Education:* Republished Papers, Vol. II. Studies of the International Institute of Teachers College, Columbia University, No. 15. New York: Teachers College, Columbia University, 1932. Pp. viii+312.

PIERCE, BESSIE LOUISE. *Citizens' Organizations and the Civic Training of Youth.* Report of the Commission on the Social Studies of the American Historical Association, Part III. New York: Charles Scribner's Sons, 1933. Pp. xviii +428. $2.00.

RANEY, M. LLEWELLYN. *The University Libraries.* The University of Chicago Survey, Vol. VII. Chicago: University of Chicago Press, 1933. Pp. xvi+ 250.

REEVES, FLOYD W., KELLY, FREDERICK J., and RUSSELL, JOHN DALE. *University Plant Facilities.* The University of Chicago Survey, Vol. IX. Chicago: University of Chicago Press, 1933. Pp. xiv+154.

REEVES, FLOYD W., and OTHERS. *University Extension Services.* The University of Chicago Survey, Vol. VIII. Chicago: University of Chicago Press, 1933. Pp. xvi+174.

REEVES, FLOYD W., and OTHERS. *The University Faculty.* The University of Chicago Survey, Vol. III. Chicago: University of Chicago Press, 1933. Pp. xxvi+326.

REEVES, FLOYD W., and RUSSELL, JOHN DALE. *The Alumni of the Colleges.* The University of Chicago Survey, Vol. VI. Chicago: University of Chicago Press, 1933. Pp. xx+126.

SCHMIDT, G. A. *Vocational Education in Agriculture in Federally-aided Secondary Schools:* A Study of Its Instructional and Training Phases. Teachers College Contributions to Education, No. 534. New York: Teachers College, Columbia University, 1932. Pp. x+94. $1.50.

The Teaching of Mathematics in the Secondary School. Eighth Yearbook of the National Council of Teachers of Mathematics. New York: Teachers College, Columbia University, 1933. Pp. 264.

WALLER, J. FLINT. *Outside Demands and Pressures on the Public Schools.* Teachers College Contributions to Education, No. 542. New York: Teachers College, Columbia University, 1932. Pp. vi+152. $1.50.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

ELLIS, ELMER. *Directed Study Workbook in World History.* New York: Charles Scribner's Sons, 1933. Pp. 218+xxiv.

TANNER, WILLIAM M. *Correct English:* Introductory Course. Boston: Ginn & Co., 1933. Pp. xiv+562. $1.24.

WALTER, ALBERTA, and PARKMAN, MARY R. *The Study Readers:* Book Four, pp. x+414, $0.84; Book Five, pp. x+434, $0.88; Book Six, pp. x+466, $0.88. New York: Charles E. Merrill Co., 1933 (revised).

WILSON, GUY M. *My Subtraction Drill Book* (Equal Additions Method). New York: Macmillan Co., 1933. Pp. vi+50.

PUBLICATIONS OF THE UNITED STATES OFFICE OF EDUCATION AND OTHER MATERIAL IN PAMPHLET FORM

BRYAN, MARY DE GARMO, and HANDY, ETTA H. *Furnishings and Equipment for Residence Halls.* New York: Teachers College, Columbia University, 1933. Pp. viii+96.

CAMPBELL, DOAK S. *Principals of the Accredited High Schools of the Southern Association of Colleges and Secondary Schools:* A Report to the Commission on Secondary Schools. Nashville, Tennessee: Division of Surveys and Field Studies, George Peabody College for Teachers, 1932. Pp. 56.

CASWELL, HOLLIS L. *Non-Promotion in Elementary Schools.* Field Studies No. 4. Nashville, Tennessee: Division of Surveys and Field Studies, George Peabody College for Teachers, 1933. Pp. x+100. $0.30.

CUNLIFFE, REX B. *Trends in Vocational Guidance.* Rutgers University Bulletin, Series VIII, No. 10b, Studies in Education No. 4. New Brunswick, New Jersey: School of Education, Rutgers University, 1933. Pp. 42.

DOWNING, CHESTER MILLER, under the Direction of Charles Swain Thomas. A Lower Extension of the Inglis Tests of English Vocabulary: With Norms for Grades 6, 7, 8, 9, and 10. Forms X and Y. Boston: Ginn & Co., 1932.

Educational Tests and Their Uses. Review of Educational Research, Vol. III, No. 1. Washington: American Educational Research Association of the National Education Association, 1933. Pp. 80. $1.00.

GATES, ARTHUR I., and PEARDON, CELESTE COMEGYS. *Manual of Directions for "Practice Exercises in Reading":* Types A, B, C, and D, Books III, IV, and V. New York: Teachers College, Columbia University, 1933.

HOLY, T. C., and SUTTON, D. H. *Financial Status of Ohio City and Exempted-Village School Districts.* Bureau of Educational Research Monographs, No. 13. Columbus, Ohio: Ohio State University, 1932. Pp. viii+76. $1.00.

Individualization of Instruction: Devices for Use within the Teaching Group. Bulletin No. 272 of the Division of Educational Research and Results. Philadelphia: Board of Public Education, 1933. Pp. 36.

LANGDON, GRACE. *An Individual Study Guide:* To Be Used with "Home Guidance for Young Children." John Day Education Pamphlet Series. New York: John Day Co., Inc., 1933. Pp. 64. $0.50.

New York Spelling Test—Series PW: Based on the Lists of Prescribed Words in the New York City Course of Study in Spelling, Grades 4B–8B. Prepared by the Bureau of Reference, Research, and Statistics. Publication No. 26. New York: Board of Education of the City of New York, 1932. Pp. 16.

New York Survey Tests in Arithmetic: Manual of Directions (Fundamental Operations—Integers, Advanced Examination, Grades 4B–8B). Prepared by the Bureau of Reference, Research, and Statistics. Publication No. 25. New York: Board of Education of the City of New York, 1932. Pp. 16.

Reading Readiness Tests. Developed by M. J. Van Wagenen. Minneapolis, Minnesota: Educational Test Bureau, Inc.

Recent issues of the Office of Education:

Bulletin No. 16, 1932—*Bibliography of Research Studies in Education, 1930–1931.*

Bulletin No. 17, 1932, National Survey of Secondary Education, Monograph No. 22—*Instruction in Science* by Wilbur L. Beauchamp.

Bulletin No. 17, 1932, National Survey of Secondary Education, Monograph 23—*Instruction in Mathematics* by Edwin S. Lide.

Bulletin No. 20, 1932—*The Preparation of Junior High School Teachers* by Oliver R. Floyd.

SYMONDS, PERCIVAL M., and BLOCK, VIRGINIA LEE. Student Questionnaire. New York: Teachers College, Columbia University, 1932.

Twenty-seventh Annual Report of the President and of the Treasurer of the Carnegie Foundation for the Advancement of Teaching. New York: Carnegie Foundation for the Advancement of Teaching, 1932. Pp. vi+174.

Unit Scales of Attainment. Developed by M. E. Branom, L. J. Brueckner, A. M. Jordan, Prudence Cutright, W. A. Anderson, Mary G. Kelty, August Dvorak, and M. J. Van Wagenen. Division 1 for Grades III–IV, Division 2 for Grades V–VI, Division 3 for Grades VII–VIII (also available in separate subjects). Minneapolis, Minnesota: Educational Test Bureau, Inc., 1932.

MISCELLANEOUS PUBLICATIONS

Annual Report of the Board of Regents of the Smithsonian Institution for the Year Ending June 30, 1931. Washington: Government Printing Office, 1932. Pp. xiv+592.

NASH, JAY B. *Spectatoritis.* New York: Sears Publishing Co., Inc., 1932. Pp. 284. $2.50.

RUGG, HAROLD. *The Great Technology:* Social Chaos and the Public Mind. New York: John Day Co., 1933. Pp. xiv+308. $2.50.

RUSSELL, DORA. *Children:* Why Do We Have Them? New York: Harper & Bros., 1933. Pp. 288. $2.50.

THWING, CHARLES FRANKLIN. *Friends of Men:* Being a Second Series of Guides, Philosophers and Friends. New York: Macmillan Co., 1933. Pp. xii+480. $3.00.